



IMPERIAL AGRICULTURAL
RESEARCH INSTITUTE, NEW DELHI

MG/PC-94 III 191-25 8-45-5000

THE JOURNAL OF BIOLOGICAL CHEMISTRY

FOUNDED BY CHRISTIAN A. HERTER AND SUSTAINED IN PART BY THE CHRISTIAN A. HERTER
MEMORIAL FUND

EDITED FOR THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS

EDITORIAL BOARD

RUDOLPH J. ANDERSON
W. MANSFIELD CLARK
HANS T. CLARKE
EDWARD A. DOISY

HOWARD B. LEWIS
ELMER V. MCCOLLUM
WILLIAM C. ROSE
DONALD D. VAN SLYKE

INDEX
VOLUMES 101-125
1933-1938

COMPILED BY
ISAAC NEUWIRTH

NEW HAVEN

1939

Made in the United States of America

COPYRIGHT, 1939
BY
THE JOURNAL OF BIOLOGICAL CHEMISTRY

PUBLISHED AT YALE UNIVERSITY FOR
THE JOURNAL OF BIOLOGICAL CHEMISTRY, INC.
WAVERLY PRESS, INC.
BALTIMORE, U. S. A.

AUTHOR INDEX

A

- Abbott, Lynn DeForrest, Jr.** See GAEBLER, 117, 397
 —. See GAEBLER and ABBOTT, 119, xxxvi
 123, 119
- Abbott, W. O.** See KARR, AUSTIN, ABBOTT, and HOFFMAN, 119, lv
 —. See HOFFMAN, ABBOTT, KARR, and MILLER, 123, lvii
- Abels, Julius C.** A simple method for the determination of acetone in blood and urine, 119, 663
 —. See MOYER and ABELS, 121, 331
- Abramson, Harold A.** See MOYER and ABRAMSON, 123, 391
- Adams, Elliott T.** Theoretical considerations concerning the union of oxygen and carbon monoxide with hemoglobin, 105, iii
 —. On the equilibrium between oxygen and respiratory pigments, 119, iii
- Adams, Mildred, and Boothby, Walter M.** Changes in the oxygen content of venous blood as the result of fever therapy with and without the administration of oxygen, 114, iii
- Adams, Philip D.** The oxygen uptake and composition of the skin of rats in vitamin G deficiency, 116, 641
- Addis, T., Poo, L. J., Lew, W., and Yuen, D. W.** Gravimetric methods for the determination of total body protein and organ protein, 113, 497
 —, —, and —. The quantities of protein lost by the various organs and tissues of the body during a fast, 115, 111
 —, —, and —. Protein loss from liver during a two day fast, 115, 117
 —, —, and —. The rate of protein formation in the organs and tissues of the body. I. After casein refeeding, 116, 343
 —, Karnofsky, D., Lew, W., and Poo, L. J. The protein content of the organs and tissues of the body after administration of thyroxine and dinitrophenol and after thyroidectomy, 124, 33
- Albrecht, Audra J.** See LANGLEY and ALBRECHT, 108, 729
- Allen, Frank Worthington, and Cerecedo, Leopold R.** Studies on purine metabolism. II.

Allen, Frank Worthington—*continued*

The fate of guanine in the organism of the dog,

102, 313

— See CERECEDO and ALLEN, 107, 421

— See EILER and ALLEN, 123, 655

Allen, Willard M. See WINTERSTEINER and ALLEN,

107, 321

— and Goetsch, Carl. A simplified method for the preparation of crystalline progesterone from pig ovaries,

116, 653

Allers, W. D. See KENDALL, MASON, MYERS, and ALLERS,

114, lvii

Almaden, Phillip. See YAVORSKY, ALMADEN, and KING,

106, 525

Almquist, H. J., and Greenberg, David M. The influence of pH on the optical rotation of proteins,

105, 519

—, Lorenz, F. W., and Burmes-ter, Ben R. Relation of depot fat to egg yolk fat in laying hens,

106, 365

— and Stokstad, E. L. R. Hemorrhagic chick disease of dietary origin,

111, 105

— Purification of the anti-hemorrhagic vitamin,

114, 241

— Purification of the anti-hemorrhagic vitamin by distillation,

115, 589

— Chemical and physical studies on the antihemorrhagic vitamin,

117, 517

— Further studies on the anti-hemorrhagic vitamin,

120, 635

— See KLOSE, STOKSTAD, and ALMQUIST,

123, 691

— See KLOSE, ALMQUIST, and MECCHI,

125, 681

Altschul, Aaron M., and Hogness, T. R. Spectroscopic evidence for the existence of carboxycytochrome C,

124, 25

— See STOTZ, ALTSCHUL, and HOGNESS,

124, 745

Altschule, Mark D. See GILLIGAN, VOLK, and ALTSCHULE,

103, 745

Alving, Alf S., and Gordon, Wayne. Studies of urea, creatinine, and ammonia excretion in dogs in acidosis,

120, 103

Ambrose, Anthony M., Power, Francis W., and Sherwin, Carl P. Further studies on the detoxication of phenylacetic acid,

101, 669

— and Sherwin, Carl P. Source of glucuronic acid,

105, iv

Ammerman, Marion. See WATERMAN and AMMERMAN,

105, xcvi

Anchel, Marjorie, and Schoenheimer, Rudolf. Reagents for the isolation of carbonyl compounds from unsaponifiable material,

114, 539

— and —. Application of ketone reagents to the isolation of ketonic acids. Isolation of 3-hydroxy-6-ketoallocholan-ic acid from hog bile,

124, 609

- and —. Deuterium as an indicator in the study of intermediary metabolism. XV. Further studies in coprosterol formation. The use of compounds containing labile deuterium for biological experiments, 125, 23
- Anderson, Arthur B. See NIE-MANN, ANDERSON, and LINK, 116, 447
- Anderson, Carl E. See GREEN-BERG, ANDERSON, and TUFTS, 111, 561
114, xliii
- Anderson, Ernest. The mucilage from slippery elm bark, 104, 163
- and Fireman, Milton. The mucilage from psyllium seed, *Plantago psyllium*, L., 109, 437
- and Krznarich, Paul W. Hemicellulose from oat hulls, 111, 549
- . The isolation of pectic substances from wood, 112, 531
- , Russell, F. H., and Seigle, L. W. The gum from lemon trees, 113, 683
- , Seigle, L. W., Krznarich, Paul W., Richards, Llewellyn, and Marteny, W. W. The isolation of pectic substances from wood. II, 121, 165
- Anderson, Harriott I. Gates. See PERLZWEIG, KONDRITZER, and BRUCH, 123, xcii
- Anderson, Ian A. See BUELL, ANDERSON, and STRAUSS, 114, xvi
- Anderson, R. J. See PANGBORN and ANDERSON, 101, 105
- and Newman, M. S. The chemistry of the lipids of tubercle bacilli. XXXIII. Isolation of trehalose from the acetone-soluble fat of the human tubercle bacillus, 101, 499
- and —. XXXIV. Isolation of a pigment and of anisic acid from the acetone-soluble fat of the human tubercle bacillus, 101, 773
- . See NEWMAN and ANDERSON, 102, 219, 229
- and Newman, M. S. The chemistry of the lipids of tubercle bacilli. XXXV. The constitution of phthiocol, the pigment isolated from the human tubercle bacillus, 103, 197
- and —. XXXVII. The synthesis of phthiocol, the pigment of the human tubercle bacillus, 103, 405
- . See CROWDER and ANDERSON, 104, 399, 487
- . See BENGIS and ANDERSON, 105, 139
- . See NEWMAN, CROWDER, and ANDERSON, 105, 279
- . See SALISBURY and ANDERSON, 112, 541
- . See SPIELMAN and ANDERSON, 112, 759
- , Crowder, J. A., Newman, M. S., and Stodola, F. H. The chemistry of the lipids of tubercle bacilli. XLIII. The composition of leprosin, 113, 637

Anderson, R. J.—continued

—, —, —, and —. The composition of leprosin, 114, iii

— See CROWDER, STODOLA, and ANDERSON, 114, 431

— See STODOLA and ANDERSON, 114, 467

— See REEVES and ANDERSON, 119, 535, 543

— See CASON and ANDERSON, 119, 549

—, Reeves, Richard E., and Stodola, F. H. The chemistry of the lipids of tubercle bacilli. LI. Concerning the firmly bound lipids of the human tubercle bacillus, 121, 649

—, —, and Crowder, J. A. The chemistry of the lipids of tubercle bacilli. LII. The composition of the acetone-soluble fat of *Bacillus lepræ*, 121, 669

—, Lothrop, W. C., and Creighton, M. M. The chemistry of the lipids of tubercle bacilli. LIII. Studies on the phosphatide of the human tubercle bacillus, 125, 299

Anderson, Richmond K., and Squires, Raymond B. Influence of phlorhizin on serum phosphatase activity, 124, 71

Anderson, Rubert S. The attempted use of crystals as calcium electrodes, 115, 323

Anderson, Thomas F. See HARKINS and ANDERSON, 125, 369

Anderson, William E. See

LIGHT, SMITH, SMITH, and ANDERSON, 107, 689

— See PAQUIN and ANDERSON, 114, lxxix

Andes, Jerome E., and Myers, Victor C. Colorimetric estimation of guanidine-like substances in the urine, 118, 137

— The determination of blood creatine with 3,5-dinitrobenzoic acid as a color reagent, 119, iv

Andrews, James C., and Johnston, Charles G. The absorption of certain sulfur compounds from intestinal loops of dogs, 101, 635

— and Andrews, Kathleen Crandall. The decomposition of cystine phenylhydantoin, 102, 253

— The racemization and oxidation of cystine in acid solution, 102, 263

— and Andrews, Kathleen Crandall. The preparation and properties of cystine hydantoin, 105, iv

—, Johnston, Charles G., and Andrews, Kathleen Crandall. The absorption and metabolism of cystine and of certain cystine derivatives in dogs with isolated intestinal loops, 109, iii

— See JONES, ANDREWS, and ANDREWS, 109, xlvii

— The hydrolysis of hair, 114, iii

— and Andrews, Kathleen Crandall. A critical study of the

- Sullivan method for the determination of cystine, 114, iv
- and —. Substances which inhibit color development in the Sullivan method for cystine, 118, 555
- The solubility of amino acids in concentrated sulfuric acid, 119, v
- See RUTENBER and ANDREWS, 119, lxxxvi 120, 203
- Reduction of certain sulfur compounds to hydrogen sulfide by the intestinal microorganisms of the dog, 122, 687
- , Andrews, Kathleen Crandall, and Rutenber, Charles B. Studies on cystinuria. The effect of administration of large doses of ascorbic acid and of methionine to the cystinuric, 123, iii
- Andrews, Kathleen Crandall. See ANDREWS and ANDREWS, 102, 253 105, iv
- See ANDREWS, JOHNSTON, and ANDREWS, 109, iii
- See JONES, ANDREWS, and ANDREWS, 109, xlvii
- See ANDREWS and ANDREWS, 114, iv 118, 555
- See ANDREWS, ANDREWS, and RUTENBER, 123, iii
- Ansbacher, S., and Supplee, G. C. The cholesterol content and the antirachitic activation of milk constituents, 105, 391
- See SUPPLEE, ANSBACHER, and BENDER, 110, 365
- See SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER, 113, 787
- See SUPPLEE, ANSBACHER, BENDER, and FLANIGAN, 114, 95
- Anslow, Gladys A., Foster, Mary Louise, and Klingler, Charlotte. The absorption spectra of glycine solutions and their interpretation, 103, 81
- Antaki, Albert. See KERR and ANTAKI, 121, 531 122, 49
- Applebaum, E. See HOLLANDER, BODECKER, SAPER, and APPLEBAUM, 105, xl
- Archibald, R. C. See EVANS, MURPHY, ARCHIBALD, and CORNISH, 108, 515
- Armitage, Alfred. See MCCAY and MAYNARD, 109, 29
- Armstrong, W. D. See RENSHAW and ARMSTRONG, 103, 187
- Composition of whole sound teeth, enamel, and dentin, 109, iv
- Fluorine content of enamel and dentin of sound and carious teeth, 119, v
- and Brekhus, P. J. Chemical constitution of enamel and dentin. I. Principal components, 120, 677
- See GRUNER, MCCONNELL, and ARMSTRONG, 121, 771
- Arnold, Aaron. See ELVEHJEM, SHERMAN, and ARNOLD, 109, xxix

- Arnold, Aaron**—*continued*
 —, **Kline, O. L., Elvehjem, C. A., and Hart, E. B.** Further studies on the growth factor required by chicks. The essential nature of arginine, 116, 699
 —. See **STIRN** and **ARNOLD**, 123, cxvii
- Arnow, L. Earle.** Physicochemical effects produced by the irradiation of crystalline egg albumin solutions with α particles, 110, 43
 —. Colorimetric determination of the components of 3,4-dihydroxyphenylalanine-tyrosine mixtures, 118, 531
 —. The formation of dopa by the exposure of tyrosine solutions to ultraviolet radiation, 120, 151
- Astrup, Tage, and Jensen, Hans Behrnts.** Chemistry of heparin, 124, 309
- Atkin, Lawrence.** See **KIRBY** and **ATKIN**, 116, 511
- Ault, W. C., and Brown, J. B.** The fatty acids of the phosphatides of beef suprarenals, 107, 607
 — and —. Some observations concerning the chemistry of arachidonic acid and its quantitative estimation, 107, 615
- Austin, J. Harold.** See **DRABKIN** and **AUSTIN**, 105, xxiii
 112, 51
 — and **Drabkin, David L.** Spectrophotometric studies. III. Methemoglobin, 112, 67
- . See **DRABKIN** and **AUSTIN**, 112, 89, 105
 —. See **SUNDERMAN** and **AUSTIN**, 114, ciii
 —. See **KARR**, **AUSTIN**, **ABBOTT**, and **HOFFMAN**, 119, lv
- Austin, W. C., and Humoller, Fred L.** The preparation of crystalline β -l-altrose, a new aldohexose, from *l*-ribose by the cyanohydrin reaction, 105, v
- Avery, Bennett F., Kerr, Stanley E., and Ghantus, Musa.** The lactic acid content of mammalian brain, 110, 637
- Avrin, Ira.** See **BERNSTEIN**, **JONES**, **ERICKSON**, **WILLIAMS**, **AVRIN**, and **MACY**, 122, 507
 —. See **ERICKSON**, **WILLIAMS**, **BERNSTEIN**, **AVRIN**, **JONES**, and **MACY**, 122, 515
 —. See **WILLIAMS**, **ERICKSON**, **AVRIN**, **BERNSTEIN**, and **MACY**, 123, 111
- Aylward, Francis X., and Holt, L. Emmett, Jr.** The nature of the lipotropic agent in pancreas, 121, 61
- Ayres, Gilbert B., and Lee, Milton.** Determination of the nitrogen partition in tissues, 115, 139

B

- Babbitt, Dorothea.** See **MARSHALL**, 122, 263
- Babcock, Sidney H., Jr.** See **JUKES** and **BABCOCK**, 123, lxv
 125, 169

- Babers, Frank H.** See **GOEBEL**
and **BABERS**, 101, 173
105, xxx
- and **Goebel, Walther F.** The
synthesis of the *p*-aminophenol
 β -glycosides of maltose, lactose,
cellobiose, and gentiobiose,
105, 473
- . See **GOEBEL** and **BABERS**,
106, 63
110, 707
111, 347
- Babler, Bernard J.** See
SCHWÖGLER, **BABLER**, and
HURD, 113, 749
- Bachman, C.** See **GURIN**, **BACH-**
MAN, and **WILSON**,
123, xlix
- Baernstein, Harry D.** The sul-
fur distribution in proteins,
105, vi
- . A modification of the
method for determining meth-
ionine in proteins, 106, 451
- . A new method for the de-
termination of methionine in
proteins, 114, v
115, 25
- . The sulfur distribution in
proteins. II. The combined
methods for the determination
of cystine, methionine, and
sulfates in hydriodic acid di-
gests, 115, 33
- . The nutritional value of
various protein fractions of the
peanut, 122, 781
- Baker, Zelma, Fazekas, J. F.,**
and **Himwich, Harold E.** Car-
bohydrate oxidation in normal
and diabetic cerebral tissues,
125, 545
- Bakwin, Harry, and Bodansky,**
Oscar. Factors influencing
the measurement of the phos-
phatase activity of tissue ex-
tracts, 101, 641
- . See **BODANSKY** and **BAK-**
WIN, 104, 747
- Bale, William F.** See **HODGE**,
BALE, and **LEFEVRE**,
119, xlix
- . See **HAVEN**, **BALE**, and **LE-**
FEVRE, 123, lii
- . See **HODGE** and **BALE**,
123, lvii
- Ball, Eric G., and Chen, Tung-**
Tou. Studies on oxidation-
reduction. XX. Epinephrine
and related compounds,
102, 691
- . Studies on oxidation-reduc-
tion. XXI. Phthiocol, the
pigment of the human tubercle
bacillus, 106, 515
- and **Sadusk, Joseph F., Jr.** A
study of the estimation of
sodium in blood serum,
113, 661
- . Echinochrome, its isolation
and composition, 114, vi
- . Oxidation-reduction poten-
tials of the ascorbic acid sys-
tem, 114, vii
- . Studies on oxidation-reduc-
tion. XXII. Lapachol, lo-
matiol, and related compounds,
114, 649
- . XXIII. Ascorbic acid,
118, 219
- Balls, A. K., and Swenson, T. L.**
The antitrypsin of egg white,
106, 409
- and **Hale, W. S.** On peroxi-
dase, 107, 767

Balls, A. K.—*continued*

— and Hoover, Sam R. The milk-clotting action of papain, 121, 737

—, Matlack, M. B., and Tucker, I. W. The hydrolysis of glycerides by crude pancreas lipase, 122, 125

— and —. Mode of action of pancreatic lipase, 123, 679

— and —. The enzymic hydrolysis of benzyl stearate and benzyl butyrate, 125, 539

Bancroft, Frederic W. See CHARGAFF, BANCROFT, and STANLEY-BROWN,

115, 149, 155

116, 237

Bandemer, S. L. See SCHAIBLE, BANDEMER, and MOORE,

109, lxxix

Barbour, A. D. The deposition and utilization of hydrogenation isooleic acid in the animal body, 101, 63

—. The effect of the saturated fatty acid content of the diet on the composition of the body fat, 106, 281

Barbour, Henry G. See SMITH, TRACE, and BARBOUR,

116, 371

Barker, H. Albert. The optical rotatory power of heat-denatured egg albumin,

103, 1

—. The refractivity of heat-denatured egg albumin,

104, 667

Barker, S. B. See GOLDFARB, BARKER, and HIMWICH,

105, 283, 287

—, Chambers, William H., and Dann, Margaret. Metabolism of carbohydrate in the de-pancreatized dog,

118, 177

Barnard, Robert D. The reactions of nitrite with hemoglobin derivatives,

120, 177

Barnett, Harold M. The determination of carotene in butter fat,

105, 259

Barrett, H. M., Best, Charles H., and Ridout, Jessie H. The source of liver fat,

123, iii

Barron, Alberto Guzman. See BARRON, BARRON, and KLEMPERER,

116, 563

Barron, E. S. Guzman, and Hastings, A. Baird. The oxidation-reduction potentials of lactoflavin,

105, vii

— and —. Studies on biological oxidations. III. The oxidation-reduction potential of the system lactate-enzyme-pyruvate,

107, 567

—. See DEMEIO, KISSIN, and BARRON,

107, 579

— and Hastings, A. Baird. The oxidation-reduction potentials of cyanide-hemochromogen,

109, iv

—, DeMeio, R. H., and Klempner, Friedrich W. Studies on biological oxidations. V. Copper and hemochromogens as catalysts for the oxidation of ascorbic acid. The mechanism of the oxidation,

112, 625

—. Studies on biological oxida-

- tions. VI. The oxidation of pyruvic acid by gonococci, 113, 695
- , **Barron, Alberto Guzman,** and **Klemperer, Friedrich W.** Studies on biological oxidations. VII. The oxidation of ascorbic acid in biological fluids, 116, 563
- See **HOGNESS, ZSCHEILE, SIDWELL,** and **BARRON,** 118, 1
- The oxidation-reduction potentials of *Spirographis* hemin and of some of its hemochromogens, 119, vi
- See **LYMAN** and **BARRON,** 121, 275
- Studies on biological oxidations. IX. The oxidation-reduction potentials of blood hemin and its hemochromogens, 121, 285
- The basic dissociation constant of α -picoline, 121, 313
- and **Lyman, Carl M.** Studies on biological oxidations. X. The oxidation of unsaturated fatty acids with blood hemin and hemochromogens as catalysts, 123, 229
- See **SIDWELL, MUNCH, BARRON,** and **HOGNESS,** 123, 335
- and **Lyman, Carl M.** The oxidation and dismutation of pyruvic acid, 123, iv
- Bartholomew, E. T.,** and **Raby, E. C.** The recovery of hydrocyanic acid from fumigated citrus leaves, 113, 655
- Bartlett, Paul.** See **GAEBLER** and **BARTLETT,** 123, xl
- Bartlett, Paul D., Kuna, Martin,** and **Levene, P. A.** The configurational relationship of α -hydroxy-*n*-valeric and α -hydroxyisovaleric acids, 118, 503
- , —, and —. The configurational relationship of α -hydroxy-*n*-caproic and α -hydroxyisocaproic acids, 118, 513
- Bashour, Joseph T.,** and **Bauman, Louis.** Note on the quantitative precipitation of cholesterol digitonide in the presence of bile salts, 117, 551
- See **CORTESE** and **BASHOUR,** 119, 177
- and **Bauman, Louis.** The solubility of cholesterol in bile salt solutions, 121, 1
- Bates, Robert W.,** and **Koch, F. C.** Studies on the trypsinogen, enterokinase, and trypsin system. Assay methods for trypsinogen and enterokinase, 111, 197
- A rapid method for quantitative determination of tryptophane, 119, vii
- and **Riddle, Oscar.** Preparation of prolactin free from other pituitary hormones and preparation of a mixture of other pituitary hormones free from prolactin, 123, v
- Baudisch, Oskar.** Nitrate and nitrite assimilation. XX. Formation of active hydrogen

- during autoxidation of ferrous hydroxide, 105, vii
- Bauguess, Lyle C., and Berg, Clarence P. Tryptophane metabolism. V. Growth on tryptophane-deficient diets supplemented with β -3-indole-acrylic, α -oximino- β -3-indole-propionic, and *l*- and *dl*- β -3-indolelactic acids, 104, 675
- and —. VI. The production of kynurenic acid from indole derivatives, 104, 691
- and —. The production of kynurenic acid from tryptophane and indole derivatives, 105, viii
- and —. Tryptophane metabolism. VII. Growth and kynurenic acid production on amides of *l*-tryptophane, 106, 615
- . Tryptophane metabolism of the diphtheria bacillus, 109, v
- and Berg, Clarence P. Tryptophane metabolism. VIII. Growth and kynurenic acid production on carbonic acid derivatives of tryptophane, 114, 253
- Baum, Harry. See FISHBERG and BAUM, 123, xxxv
- Bauman, Louis. See CORTESE and BAUMAN, 113, 779
- . See BASHOUR and BAUMAN, 117, 551
- 121, 1
- Baumann, C. A., and Steenbock, H. Fat-soluble vitamins. XXXVI. The carotene and vitamin A content of butter, 101, 547
- and —. XXXVII. The stability of carotene solutions, 101, 561
- , —, Ingraham, Mary A., and Fred, E. B. Fat-soluble vitamins. XXXVIII. Microorganisms and the synthesis of carotene and vitamin A, 103, 339
- , —, Beeson, W. M., and Rupel, I. W. Fat-soluble vitamins. XXXIX. The influence of breed and diet of cows on the carotene and vitamin A content of butter, 105, 167
- . See SEMB, BAUMANN, and STEENBOCK, 107, 697
- , Riising, Blanche M., and Steenbock, H. Fat-soluble vitamins. XLII. The absorption and storage of vitamin A in the rat, 107, 705
- Baumann, Emil J., Sprinson, David B., and Metzger, Nannette. The relation of thyroid to the conversion of cyanides to thiocyanate, 102, 773
- , —, and —. The estimation of thiocyanate in urine, 105, 269
- , Metzger, Nannette, and Sprinson, David B. The excretion of thiocyanate in man and the rabbit, 105, ix
- , Sprinson, David B., and Metzger, Nannette. A polyhydroxy acid from the sweet pepper, 109, v
- and —. The dietary produc-

- tion of parathyroid hypertrophy in rabbits, 119, vii
- , —, and Metzger, Nannette. A polyhydroxy acid from the sweet pepper; a correction, 119, viii
- and Metzger, Nannette. On the amount of iodine in blood, 121, 231
- and —. The iodine of pituitary and other tissues, 123, vi
- Baur, Lorenz. See BURKHART, BAUR, and LINK, 104, 171
- See MORELL, BAUR, and LINK, 105, 1, 15
- and Link, Karl Paul. The methylglycosides of the naturally occurring hexuronic acids. IV. Polygalacturonic acid-methylglycosides derived from Ehrlich's "Pektolsäure" and "Pektolactonsäure," 109, 293
- See MORELL, BAUR, and LINK, 110, 719
- Baxter, Hamilton. Variations in the inorganic constituents of mixed and parotid gland saliva activated by reflex stimulation in the dog, 102, 203
- Beach, Eliot F., and White, Abraham. Methionine as the limiting nutritive factor of arachin, 119, viii
- See WHITE and BEACH, 122, 219
- , Erickson, Betty Nims, Bernstein, Samuel S., and Williams, Harold H. Basic amino acid content of post-hemolytic residue, or stroma, of erythrocytes, 123, vi
- Beard, Howard H., and Boggess, Thomas S. The effect of parenteral injection of amino acids and related substances upon creatine formation and storage in the rat, 114, viii, 771
- , —, and Pizzolato, Philip. Further observations of the effect of parenteral injection of amino acids and related substances upon creatine formation and storage in the rat, 119, ix
- and Pizzolato, Philip. The effect of parenteral injection of purines, methylated purines, and various drugs upon creatine-creatinine metabolism, 123, vii
- Beard, J. W., and Wyckoff, Ralph W. G. The pH stability of the papilloma virus protein, 123, 461
- de Beer, Edwin J., Johnston, Charles G., and Wilson, D. Wright. The composition of intestinal secretions, 108, 113
- Beeson, W. M. See BAUMANN, STEENBOCK, BEESON, and RUPEL, 105, 167
- Behre, Jeanette Allen, and Benedict, Stanley R. On the presence of creatinine in blood, 110, 245
- See BENEDICT and BEHRE, 114, 515
- and Benedict, Stanley R. Experiments on the precipitation of creatinine rubidium picrate from blood plasma filtrates, 117, 415

- Behrens, Otto K.** See DU VIGNEAUD and BEHRENS, 117, 27
- and du Vigneaud, Vincent. The synthesis of anserine from *l*-1-methylhistidine, 120, 517
- . See BERGMANN and BEHRENS, 124, 7
- Belcher, Donald.** See SENDROY, SHEDLOVSKY, and BELCHER, 115, 529
- Belfer, Samuel.** See BRADLEY and BELFER, 123, xv
124, 331
- Bell, William P.** See TWEEDY, BELL, and VICENS-RIOS, 105, xcv
108, 105
- . See TWEEDY, SMULLEN, and BELL, 116, 163
- Bellis, Carroll J., and Scott, F. H.** The alteration of protein distribution, *in vitro*, between corpuscles and plasma caused by isosmotic and hyperosmotic solutions, 111, 17
- Bender, J. A.** See HAYMAN, JOHNSTON, and BENDER, 108, 675
- Bender, R. C.** See SUPPLEE, ANSBACHER, and BENDER, 110, 365
- . See SUPPLEE, ANSBACHER, BENDER, and FLANIGAN, 114, 95
- Benedict, Francis G.** A stack of constant volume for respiration experiments with humans, 116, 307
- Benedict, Stanley R.** See BEHRE and BENEDICT, 110, 245
- and Behre, Jeanette Allen. Some applications of a new color reaction for creatinine, 114, 515
- . See BEHRE and BENEDICT, 117, 415
- Benes, Franklin A.** See BING, BENES, and REMPEL, 114, x
- Benford, Frank.** See KNUDSON and BENFORD, 105, xlviii
124, 287
- Bengis, R. O., and Anderson, R. J.** The chemistry of the coffee-bean. II. The composition of the glycerides of the coffee-bean oil, 105, 139
- Benjamin, Helen Rivkin, Hess, Alfred F., and Gross, Joseph.** The forms of magnesium in serum and milk, 103, 383
- and — . The forms of the calcium and inorganic phosphorus in human and animal sera. III. A comparison of physiological and experimental hypercalcemia, 103, 629
- . The forms of the calcium and inorganic phosphorus in human and animal sera. IV. A reply to Greenberg and Larson, 109, 123
- Bennett, Mary A.** See TOENNIES and BENNETT, 105, xcii
112, 39
- . See TOENNIES, LAVINE, and BENNETT, 112, 493
- . See TOENNIES and BENNETT, 112, 497
- . The replaceability of cystine with some partially oxidized derivatives, 119, x

- . A quantitative study of the replaceability of cystine by various sulfur-containing amino acids in the diet of the albino rat, 123, viii
- Bensley, E. H.** The renal threshold of bilirubin. II, 103, 71
- Bercovici, I.** See **MORGULIS**, 103, 757
- Berg, Benjamin N.** See **SCOTT** and **BERG**, 115, 163
- . See **SCHOENHEIMER**, **RITTENBERG**, **BERG**, and **ROUSSELOT**, 115, 635
- Berg, Clarence P.** Tryptophane metabolism. IV. The influence of optical activity on the utilization of tryptophane for growth and for kynurenic acid production, 104, 373
- . See **BAUGUESS** and **BERG**, 104, 675, 691
105, viii
106, 615
- . See **COX** and **BERG**, 107, 497
- . See **CORRELL**, **BERG**, and **COWAN**, 109, xxiv
- . See **BAUGUESS** and **BERG**, 114, 253
- . The resolution of *DL*-lysine, 114, viii
115, 9
- . See **CONRAD** and **BERG**, 117, 351
- . See **CORRELL**, **BERG**, and **COWAN**, 123, 151
- . See **TOTTER** and **BERG**, 123, cxxii
- Bergen, Dorothy S.** See **WILEY**, **BERGEN**, and **BLOOD**, 119, cv
- Berger, Julius, Johnson, Marvin J., and Peterson, W. H.** The proteolytic enzymes of some common molds, 117, 429
- and — . Properties of some bacterial peptidase systems, 123, ix
- , — , and **Peterson, W. H.** The proteolytic enzymes of bacteria. I. The peptidases of *Leuconostoc mesenteroides*, 124, 395
- Bergman, A. J., and Turner, C. W.** Comparison of methods of extraction of the lactogenic hormone, 118, 247
- and — . The composition of rabbit milk stimulated by the lactogenic hormone, 120, 21
- and — . The biological assay of the carbohydrate metabolism hormone of the anterior pituitary, 123, 471
- Bergman, H. C.** See **MACKEY** and **BERGMAN**, 101, 453
105, 59
- Bergmann, Max, and Fox, Sidney W.** Complex salts of amino acids and peptides. I. Metal complex salts of glycine and their specificity, 109, 317
- , **Zervas, Leonidas, Fruton, Joseph S., Schneider, F., and Schleich, H.** On proteolytic enzymes. V. On the specificity of dipeptidase, 109, 325
- and **Grafe, Karl.** New reactions of lactobiose and cellobiose, 110, 173

Bergmann, Max—*continued*

- . Complex salts of amino acids and peptides. II. Determination of *l*-proline with the aid of rhodanilic acid. The structure of gelatin, 110, 471
- , Zervas, Leonidas, and Fruton, Joseph S. On proteolytic enzymes. VI. On the specificity of papain, 111, 225
- , — , and Ross, William F. On proteolytic enzymes. VII. The synthesis of peptides of *l*-lysine and their behavior with papain, 111, 245
- and Ross, William F. On proteolytic enzymes. VIII. The proteolytic systems of papain, 111, 659
- and Zervas, Leonidas. A method for the stepwise degradation of polypeptides, 113, 341
- and — . On proteolytic enzymes. IX. The inactivation of papain with iodine, 114, 711
- and Ross, William F. On proteolytic enzymes. X. The enzymes of papain and their activation, 114, 717
- and Niemann, Carl. On blood fibrin. A contribution to the problem of protein structure, 115, 77
- , Zervas, Leonidas, and Fruton, Joseph S. On proteolytic enzymes. XI. The specificity of the enzyme Papain Peptidase I, 115, 593
- and Fruton, Joseph S. On proteolytic enzymes. XII. Regarding the specificity of aminopeptidase and carboxypeptidase. A new type of enzyme in the intestinal tract, 117, 189
- and Niemann, Carl. On the structure of proteins: cattle hemoglobin, egg albumin, cattle fibrin, and gelatin, 118, 301
- and Fruton, Joseph S. On proteolytic enzymes. XIII. Synthetic substrates for chymotrypsin, 118, 405
- and Niemann, Carl. On proteolytic enzymes. XIV. On the general nature of the enzymatic degradation of proteins, 118, 781
- , Fruton, Joseph S., and Fraenkel-Conrat, Heinz. On proteolytic enzymes. XV. Regarding the general nature of intracellular proteolytic enzymes, 119, 35
- and Fraenkel-Conrat, Heinz. The rôle of specificity in the enzymatic synthesis of proteins. Syntheses with intracellular enzymes, 119, 707
- . Complex salts of amino acids and peptides. III. Salts of dioxalatodipyridinochromiato acid (dioxypyridic acid) and dioxalatodianilinochromiato acid (dioxanilic acid), 122, 569
- and Niemann, Carl. On the structure of silk fibroin, 122, 577
- and Fraenkel-Conrat, Heinz.

- The enzymatic synthesis of peptide bonds, 124, 1
- and Behrens, Otto K. On the asymmetric course of the enzymatic synthesis of peptide bonds, 124, 7
- and Fruton, Joseph S. Some synthetic and hydrolytic experiments with chymotrypsin, 124, 321
- Bergmann, Werner.** Contributions to the study of marine products. II. The sterols of mollusks, 104, 317
- III. The chemistry of ostreasterol, 104, 553
- Note on bombicysterol, 107, 527
- The fatty acids of chrysalis oil, 114, 27
- The sterols of silkworm feces, 117, 175
- Contributions to the study of marine products. IV. The sterols of starfish, 117, 777
- V. The presence of stigmatsterol in mollusks, 118, 499
- See SPERRY and BERGMANN, 119, 171
- The isolation and analysis of the epicuticular substance cuticulin of the silkworm, *Bombyx mori*, 123, ix
- Bergström, Sune.** See JORPES and BERGSTRÖM, 118, 447
- Berliner, Frieda.** See SCHOENHEIMER and BERLINER, 115, 19
- Hemolytic and anti-hemolytic properties of bile acids and sterols, 119, xi
- and Schoenheimer, Rudolf. Hemolytic and antihemolytic properties of bile acids and sterols in relation to their structure, 124, 525
- Berman, Alvin.** See BULL, 123, 17
- Bernhard, Adolph.** See DREKTER, BERNHARD, and LEOPOLD, 110, 541
- Bernhart, F. W.** Microdetermination of the tyrosine content of protein hydrolysates, 123, x
- Bernheim, Frederick, and Bernheim, Mary L. C.** The oxidation of proline and alanine by certain tissues, 106, 79
- and —. The oxidation of tyrosine and phenylalanine by the livers and kidneys of certain animals, 107, 275
- and —. The purification of the enzymes which oxidize certain amino acids, 109, 131
- , —, and Webster, M. Dorothy. The oxidation of certain amino acids by "resting" *Bacillus proteus*, 109, vi
- , —, and —. Oxidation of certain amino acids by "resting" *Bacillus proteus*, 110, 165
- The oxidation of *l*- and *dl*-tyrosine by the livers and kidneys of various animals, 111, 217
- See WEBSTER and BERNHEIM, 114, 265
- , Bernheim, Mary L. C., and Gillaspie, Athey G. The oxidation of the amino acids.

Bernheim, Frederick—*continued*

- The estimation of the keto acids and the production of hydrogen peroxide, 114, 657
- and Michel, Harry O. The formation of methemoglobin by various tissues, 118, 743
- and Webster, M. Dorothy. Choline oxidase, 119, xi
- and Bernheim, Mary L. C. The action of *p*-aminophenol on the xanthine oxidase of liver, 123, 307
- and —. The oxidation of mescaline and certain other amines, 123, 317
- The effect of alloxan on the oxidation of alcohol by various tissues, 123, 741
- Bernheim, Mary L. C.** See BERNHEIM and BERNHEIM, 106, 79
107, 275
109, 131
- See BERNHEIM, BERNHEIM, and WEBSTER, 109, vi
110, 165
- See BERNHEIM, BERNHEIM, and GILLASPIE, 114, 657
- See BERNHEIM and BERNHEIM, 123, 307, 317
- Bernstein, Samuel S.** See ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY, 114, xxxii
- See ERICKSON, WILLIAMS, BERNSTEIN, and JONES, 114, xxxii
- See WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY, 118, 599

- , Jones, Robert L., Erickson, Betty Nims, Williams, Harold H., Avrin, Ira, and Macy, Icie G. A method for the preparation of posthemolytic residue or stroma of erythrocytes, 122, 507
- See ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY, 122, 515
- See WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY, 123, 111
- See BEACH, ERICKSON, BERNSTEIN, and WILLIAMS, 123, vi
- Bessey, Otto A., and King, C. G.** The distribution of vitamin C in plant and animal tissues, and its determination, 103, 687
- See CAMPBELL, BESSEY, and SHERMAN, 110, 703
- , King, C. G., Quinn, E. J., and Sherman, H. C. The normal distribution of calcium between the skeleton and soft tissues, 111, 115
- See MUUS, BESSEY, and HASTINGS, 119, lxxii
- Best, Charles H., and Ridout, Jessie H.** The effect of cholesterol and choline on liver fat, 114, ix
- See BARRETT, BEST, and RIDOUT, 123, iii
- Bethell, Frank H.** See KYER and BETHELL, 109, p. 1
114, lx
- See ROTTSCHAEFER and BETHELL, 114, lxxxv
- Bethke, R. M., Record, P. R., and Wilder, O. H. M.** Fur-

- ther studies pertaining to provitamin D of plant and animal sources, 112, 231
- Beutner, R., Caplan, M., and Loehr, W. M. The nature of the alleged molecular sieve membranes, 101, 391
- Bibler, Walter G. See EICHELBERGER, 122, 323
- Bidwell, Emily H. See SHILLITO, BIDWELL, and TURNER, 112, 551
- Bierman, William. See FISHBERG, BIERMAN, and WEISS, 114, xxxv
- Bigelow, Newell M. See JACOBS and BIGELOW, 101, 15, 697
- Bills, Charles E. See HONEYWELL and BILLS, 103, 515
- , Imboden, Miriam, and Wallenmeyer, J. C. Potency of vitamin A and vitamin D of halibut liver oil, correlated with seasonal variations in the oil content of halibut liver, 105, x
- , Massengale, O. N., McDonald, Francis G., and Wirkick, Alice M. The action of activated ergosterol in the chicken. III. Evidence of the existence of only one provitamin D in crude ergosterol, 108, 323
- , McDonald, Francis G., Massengale, O. N., Imboden, Miriam, Hall, Helen, Hergert, W. D., and Wallenmeyer, J. C. A taxonomic study of the distribution of vitamins A and D in one hundred species of fish, 109, vii
- , Massengale, O. N., Hickman, K. C. D., and Gray, E. LeB. A new vitamin D in cod liver oil, 123, x
- and Wallenmeyer, J. C. A photoelectric photometer for vitamin A determination, 123, xi
- Bing, Franklin C. See EVELETH, BING, and MYERS, 101, 359
- See HEINLE and BING, 101, 369
- , Saurwein, Esther M., and Myers, Victor C. Studies in the nutritional anemia of the rat. X. Hemoglobin production and iron and copper metabolism with milk of low copper content, 105, 343
- , Hanzal, Ramon F., and Myers, Victor C. Hyper-sideremia following the oral administration of iron, 109, viii
- , Benes, Franklin A., and Remp, Donald G. The alimentary fate of hemin in man, 114, x
- Binkley, Francis. See CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER, 123, xx
- Binns, Dorothy. See MYERS, MUNTWYLER, BINNS, and DANIELSON, 102, 19
- Birch, Thomas William. The relation between vitamin B₆ and the unsaturated fatty acid factor, 124, 775
- Bird, H. R., Elvehjem, C. A., and Hart, E. B. The distribu-

Bird, H. R.—*continued*

tion and properties of the chick gizzard factor, 114, x

— and Oleson, J. J. Effectiveness of chondroitin as the anti-gizzard erosion factor required by chicks, 123, xi

Bird, O. D. See EMMETT and BIRD, 119, xxxi

Bisbey, Bertha, and Sherman, H. C. Experiments upon the extraction and stabilities of vitamin B (B₁) and of lacto-flavin, 112, 415

Bischoff, Fritz, and Elliot, A. H. Purification of the depressor colloid of urine (callicrein), 109, 419

— See MAXWELL and BISCHOFF, 112, 215

— and Maxwell, L. C. Influence of delayed resorption of the protein hormones, 114, xi

— and Long, M. Louisa. Chemical studies on prolan (from urine of pregnancy), 116, 285

— and Elliot, A. H. Chemical studies of callicrein, 117, 7

— Chemical studies on the gonadotropic hormone of pregnant mare serum, 125, 697

Biscoe, J. See WYCKOFF, BISCOE, and STANLEY, 117, 57

Biskind, Gerson R. See GLICK and BISKIND, 110, 1, 575, 583

— and Glick, David. Studies in histochemistry. V. The vita-

min C concentration of the corpus luteum with reference to the stage of the estrous cycle and pregnancy, 113, 27

— See GLICK and BISKIND, 113, 427
114, 1
115, 551

Bjerrum, Jannik. Copper catalysis of the oxidation of thiol acids as a basis for the microdetermination of copper, 114, 357

Black, E. C. See IRVING and BLACK, 118, 337

Blacker, C. See ROSE, EXTON, and BLACKER, 105, lxxiii

Blair, H. A. See RAY and BLAIR, 111, 371

Blalock, Alfred. See MASON, BLALOCK, and HARRISON, 114, lxiv

Blanchard, Ernest W. See YEAKEL and BLANCHARD, 123, 31

Blanchard, Kenneth C. The nucleic acid of the eggs of *Arbacia punctulata*, 108, 251

— and MacDonald, Joseph. Bacterial metabolism. I. The reduction of propionaldehyde and of propionic acid by *Clostridium acetobutylicum*, 110, 145

Blanchard, Muriel H. See COHN, EDSALL, and BLANCHARD, 105, 319

— See GREEN, COHN, and BLANCHARD, 109, 631

Blatherwick, N. R., Medlar, E. M., Bradshaw, Phoebe J.,

- Post, Anna L., and Sawyer, Susan D. The dietary production of fatty livers in rats, 103, 93
- , Bradshaw, Phoebe J., Ewing, Mary E., Larson, Hardy W., and Sawyer, Susan D. The determination of tissue carbohydrates, 111, 537
- , —, Cullimore, Owen S., Ewing, Mary E., Larson, Hardy W., and Sawyer, Susan D. The metabolism of *d*-xylose, 113, 405
- , —, and Sawyer, Susan D. Muscle glycogen content of rats fasted twenty-four hours, 114, xii
- , See LARSON, BLATHERWICK, BRADSHAW, EWING, and SAWYER, 117, 719
123, lxxiii
- Blatt, Hester. See BUTLER, BLATT, and SOUTHGATE, 109, 755
- Blau, Nathan F. The determination of thyroxine in the thyroid gland, 102, 269
- , The determination of thyroxine in thyroid substance, 110, 351
- , Determination of iodine in small amounts of thyroid substance, 123, xii
- Blish, M. J., and Sandstedt, R. M. Biocatalytic activators specific for the yeast fermentation of maltose, 118, 765
- Bliss, Sidney. The cause of sore mouth in nephritis, 121, 425
- Bloch, Edith. See SOBOTKA and BLOCH, 124, 559
- and Sobotka, Harry. Urinary cholesterol in cancer, 124, 567
- Bloch, K., and Clarke, H. T. N-Methylcysteine and derivatives, 125, 275
- Block, Richard J. The basic amino acids of serum proteins, 103, 261
- and Farquhar, Lucille Reed. Studies on vitamin G (B_2). I. Yeast and liver preparations as a source of vitamin G (B_2), 103, 643
- , The basic amino acids of keratins. The basic amino acid content of human finger nails and cattle horn, 104, 339
- , The basic amino acids of serum proteins. II. The effect of heating to fifty-eight degrees, 104, 343
- , Darrow, Daniel C., and Cary, M. Katherine. The basic amino acids of serum proteins. III. A chemical relationship between serum proteins of various origins, 104, 347
- , The basic amino acids of serum proteins (orosins). IV. A chemical relationship between various avian orosins. A note on some proteins of the egg, 105, 455
- , See STUART, BLOCK, and COWGILL, 105, 463
- , The basic amino acids of three crystalline mammalian hemoglobins. Further evidence for a basic amino acid "anlage" of tissue proteins, 105, 663

Block, Richard J.—*continued*

—, Jones, D. Breese, and Gersdorff, Charles E. F. The effect of dry heat and dilute alkali on the lysine content of casein, 105, 667

— The determination of the basic amino acids in small quantities of proteins by the silver precipitation method, 106, 457

— and Brand, Erwin. On the origin of creatine. IV, 109, viii

— See BRAND, CAHILL, and BLOCK, 110, 399

— See JACKSON and BLOCK, 113, 135

—, Brand, Erwin, Harris, Meyer M., and Hinsie, L. E. Some observations on follicle-stimulating hormone obtained from urine of women in and past the menopause, 114, xii

— The amino acid composition of neuroproteins and the protein of the neurofibrils, 119, xi

—, Brand, Erwin, and Cahill, George F. The metabolism of *dl*- γ -methiol- α -hydroxybutyric acid in cystinuria, 119, xii

— See BRAND, BLOCK, and CAHILL, 119, xiv

— See BRAND, BLOCK, KASSELL, and CAHILL, 119, 669

— See BRAND, BLOCK, and CAHILL, 119, 681, 689

— Chemical studies on the neuroproteins. I. The amino

acid composition of various mammalian brain proteins, 119, 765

— II. The effect of age on the amino acid composition of human and mammalian brain proteins, 120, 467

— and Horwitt, M. K. The basic amino acids of keratins. A note on the basic amino acid content of porcupine quills and echidna spines, 121, 99

— Chemical studies on the neuroproteins. III. An indication for sex differences in the amino acid composition of primate brain proteins, 121, 411

— IV. On the nature of the proteins of the ectoderm: eukeratins and pseudokeratins, 121, 761

— See JACKSON and BLOCK, 122, 425

— Chemical studies on the neuroproteins. VI. Further evidence for sex differences in the amino acid composition of the brain proteins, 123, xiii

Block, Walter D. See CALVERY and BLOCK, 107, 155

— See CHRISTMAN and BLOCK, 109, xx

— See CALVERY, BLOCK, and SCHOCK, 113, 21

— and Lewis, Howard B. The amino acid content of cow and chimpanzee hair, 125, 561

- Blodgett, H. M.** See **BOOHER**,
BLODGETT, and **PAGE**,
107, 599
- Blood, Frank R.** See **WILEY**,
BERGEN, and **BLOOD**,
119, cv
- Bloor, W. R.** Diet and the
blood lipids. II. The effect
of occasional overfeeding on
the postabsorptive level,
103, 699
- and **Snider, Ruth H.** Cell
lipids and function in muscle,
105, x
- and —. Phospholipid con-
tent and activity in muscle,
107, 459
- See **MATTHEWS**, **NEWTON**,
and **BLOOR**, 108, 145
- and **Snider, Ruth H.** Choles-
terol in muscle, 109, ix
- The cholesterol content of
muscle, 114, 639
- Effect of activity on the
phospholipid and cholesterol
content of muscle,
119, 451
- Blumberg, Harold.** A growth
deficiency disease, curable by
wheat germ oil, 108, 227
- Blumenthal, Doris**, and **Clarke**,
H. T. Unrecognized forms of
sulfur in proteins,
110, 343
- An immunological study of
the reduction of disulfide
groups in proteins,
113, 433
- Blunden, Harry.** See **BUTTS**,
CUTLER, **HALLMAN**, and
DEUEL, 109, 597
- See **DEUEL**, **BUTTS**, **BLUN-**
DEN, **CUTLER**, and **KNOTT**,
117, 119
- See **BUTTS**, **BLUNDEN**,
GOODWIN, and **DEUEL**,
117, 131
- See **BUTTS**, **BLUNDEN**, and
DUNN, 119, 247
- See **BUTTS**, **DUNN**, and
BLUNDEN, 119, xv
- See **DEUEL**, **BUTTS**, **HALL-**
MAN, **MURRAY**, and **BLUNDEN**,
119, 617
- See **BUTTS**, **BLUNDEN**, and
DUNN, 120, 289
- See **DEUEL**, **BUTTS**, **HALL-**
MAN, **MURRAY**, and **BLUNDEN**,
123, 257
- See **BUTTS**, **BLUNDEN**, and
DUNN, 124, 709
- Bock, A. V.** See **DILL**, **DALY**,
and **BOCK**, 114, xxv
- Bodansky, Aaron.** Phosphatase
studies. II. Determination of
serum phosphatase. Factors
influencing the accuracy of the
determination, 101, 93
- VI. Non-osseous origins of
serum phosphatase. Its in-
crease after ingestion of carbo-
hydrates, 104, 473
- VII. Inorganic phosphorus
and phosphatase of the serum
in new born puppies,
104, 717
- and **Jaffe, Henry L.** Sig-
nificance of clinical and experi-
mental serum phosphatase var-
iations; their osseous and non-
osseous origins, 105, xi
- and —. Serum phosphatase,

Bodansky, Aaron—*continued*

bilirubin, and cholesterol in experimental jaundice,

109, x

— Notes on the determination of serum inorganic phosphate and serum phosphatase activity,

120, 167

— Experimental liver injury; serum phosphatase activity in relation to other findings,

123, xiv

Bodansky, Meyer. The effect of thyroid and thyroxine on the concentration of creatine in the heart, muscle, liver, and testes of the albino rat,

109, 615

— Observations on the origin of creatine,

109, xi

— The influence of feeding amino acids and other compounds on the excretion of creatine and creatinine,

112, 615

— and **Duff, Virginia B.** Nitrogen and creatine metabolism in relation to environmental temperature and thyroid function,

114, xiii

— Comparison of glycine and guanidoacetic acid as precursors of creatine,

115, 641

—, **Duff, Virginia B.**, and **Herrmann, Cornelius L.** Excretion of ingested guanidoacetic acid,

119, xiii

Bodansky, Oscar. See **BAKWIN**

and **BODANSKY**,

101, 641

— and **Bakwin, Harry.** The phosphatase hydrolysis of di-phospho-*L*-glyceric acid,

104, 747

— The accelerant effect of α -amino acids on the activity of bone phosphatase,

114, 273

— The effect of α -amino acids and magnesium on the activity of kidney and intestinal phosphatases,

115, 101

— Are the phosphatases of bone, kidney, intestine, and serum identical? The use of bile acids in their differentiation,

118, 341

— The use of different measures of reaction velocity in the study of the kinetics of biochemical reactions,

120, 555

Bodecker, C. F. See **HOLLANDER**, **BODECKER**, **SAPER**, and **APPLEBAUM**,

105, xi

Bogges, Thomas S. See **BEARD** and **BOGGESS**,

114, viii, 771

— See **BEARD**, **BOGGESS**, and **PIZZOLATO**,

119, ix

Bohstedt, G. See **PHILLIPS**, **HART**, and **BOHSTEDT**,

105, 123

Bolliger, Adolph. The volumetric determination of potassium with methylene blue following its precipitation as potassium picrate,

107, 229

Bollman, Jesse L. See **FLOCK**, **BOLLMAN**, and **MANN**,

114, xxxvi

115, 179, 201

— See **FLOCK**, **BOLLMAN**, **HESTER**, and **MANN**,

119, xxxiii

121, 117

— See **FLOCK**, **BOLLMAN**, and **MANN**,

123, xxxvi

125, 49

- See FLOCK, BOLLMAN, MANN, and KENDALL, 125, 57
- Bonner, James. See ENGLISH and BONNER, 121, 791
- Bonoff, R. See BODANSKY, 101, 93
- 104, 473, 717
- Booher, Lela E. The concentration and probable chemical nature of vitamin G, 102, 39
- Further experiments on the concentration and chemical nature of vitamin G (B₂), 105, xii
- Further studies on the concentration and chemical nature of vitamin G, 107, 591
- , Blodgett, H. M., and Page, J. W. Investigations of the growth-promoting properties of vitamin G concentrates, 107, 599
- The concentration and properties of vitamin H, 114, xiv
- See WHITCHER, BOOHER, and SHERMAN, 115, 679
- The concentration and properties of vitamin H, 119, 223
- and Lojkin, Mary. Studies on the fractionation of a factor of the vitamin B complex in rice polishings, 123, xiv
- Boothby, Walter M. See ADAMS and BOOTHBY, 114, iii
- Bordley, James, 3rd. See RICHARDS, BORDLEY, and WALKER, 101, 179
- and Richards, A. N. Quantitative studies of the composition of glomerular urine. VIII. The concentration of uric acid in glomerular urine of snakes and frogs, determined by an ultramicroadaptation of Folin's method, 101, 193
- , Hendrix, James P., and Richards, A. N. Quantitative studies of the composition of glomerular urine. XI. The concentration of creatinine in glomerular urine from frogs determined by an ultramicroadaptation of the Folin method, 101, 255
- Borek, Ernest. See HARROW, MAZUR, BOREK, and SHERWIN, 105, xxxiv
- and Clarke, H. T. Compounds related to canaline and canavanine, 125, 479
- Borgen, D. R., and Elvehjem, C. A. Factors affecting the determination of inorganic iron in animal tissues, 119, 725
- Borsook, Henry, Huffman, Hugh M., and Liu, Yun-Pu. The preparation of crystalline lactic acid, 102, 449
- Micromethods for determination of ammonia, urea, total nitrogen, uric acid, creatinine (and creatine), and allantoin, 110, 481
- and Jeffreys, Cecil E. P. Nitrogen metabolism of the isolated tissues of the rat, 110, 495
- , Davenport, Horace W., Jeffreys, Cecil E. P., and Warner, Robert C. The oxidation of ascorbic acid and its reduction *in vitro* and *in vivo* 117, 237

Borsook, Henry—*continued*

—, **Ellis, Emory L.**, and **Huffman, Hugh M.** Sulfhydryl oxidation-reduction potentials derived from thermal data, 117, 281

Bosworth, A. W., and **Brown, J. B.** Isolation and identification of some hitherto unreported fatty acids in butter fat, 103, 115

—, Studies of the fat of human milk, 106, 235

— and **Sisson, E. W.** Arachidonic acid in butter fat, 107, 489

— and **Helz, George E.** A monohydroxypalmitic acid in butter fat, 112, 489

—, See **HELZ** and **BOSWORTH**, 116, 203

Bott, P. A., and **Wilson, D. Wright.** Lactic acid formation in liver, 109, 455

— and —, The concentrations of lactic acid in blood and liver of rabbits, 109, 463

—, See **RICHARDS**, **WESTFALL**, and **BOTT**, 116, 749

Bourgeois, Warren. See **BEARD** and **BOGGESE**, 114, 771

Bovarnick, M. See **CHARGAFF** and **BOVARNICK**, 118, 421

Bowman, Donald E., **Visscher, J. P.**, and **Mull, James W.** Properties of hormones in the female urine, 109, xi

— and **Muntwyler, Edward.** Further experiments upon the excretion of ascorbic acid in the urine following ether anesthesia, 114, xiv

Boyd, Eldon M. A differential

lipid analysis of blood plasma in normal young women by microoxidative methods,

101, 323

—, The lipid content of the white blood cells in normal young women, 101, 623

—, The relation of lipid composition to physiological activity in the ovaries of pregnant and pseudopregnant rabbits,

108, 607

—, Diurnal variations in plasma lipids, 110, 61

—, The lipid content of the jelly of Wharton, 111, 667

—, Lipid composition and physiological activity in the ovaries of pregnant guinea pigs,

112, 591

—, The extraction of blood lipids, 114, 223

—, The extraction of lipids from the red blood cells,

115, 37

— and **Stevenson, J. W.** The lipid content of rabbit leucocytes, 117, 491

— and **Murray, Ronald B.** The effect of anticoagulants on blood lipids, 117, 629

—, The storage of lipid extracts, 121, 485

—, Hypertrophy and lipid composition of frog tissues,

121, 783

— and **Stevenson, J. W.** The regeneration of blood lipids following a single massive hemorrhage in rabbits,

122, 147

—, **Orr, J. H.**, and **Reed, G. B.**

- A lipemia in rabbits infected with *Streptococcus viridans*,
124, 409
- Boyd, Julian D., Drain, Charles L., and Stearns, Genevieve. Metabolic studies of children with dental caries,
103, 327
- Boyd, M. J. Hematoporphyrin, an artificial proteolytic enzyme,
103, 249
- Boyd, William C., and Hooker, Sanford B. Some analyses of azoproteins: casein, gelatin, and zein coupled with arsanilic acid,
104, 329
- and Mover, Paul. A note on azoproteins,
110, 457
- Boyd, William F. See MAY, MARTINDALE, and BOYD,
104, 255
- Boyden, Ruth, and Potter, V. R. On the form of copper in blood plasma,
122, 285
- Bradford, H. A. See SCHMIDT and BRADFORD,
105, lxxv
- Bradley, H. C., and Belfer, Samuel. Autolysis of the adrenal glands,
123, xv
- and —. Autolysis of adrenal gland tissue,
124, 331
- Bradshaw, Phoebe J. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER,
103, 93
- See BLATHERWICK, BRADSHAW, EWING, LARSON, and SAWYER,
111, 537
- See BLATHERWICK, BRADSHAW, CULLIMORE, EWING, LARSON, and SAWYER,
113, 405
- See BLATHERWICK, BRADSHAW, and SAWYER,
114, xii
- See LARSON, BLATHERWICK, BRADSHAW, EWING, and SAWYER,
117, 719
123, lxxiii
- Bramkamp, Robert G. The protein content of human parotid saliva,
114, 369
- Brand, Erwin. See FAILEY and BRAND,
102, 767
- , Brand, F. C., and Herrmann, H. The influence of drugs on oxidations of the brain,
105, xiii
- , Cahill, George F., and Harris, Meyer M. Cystinuria. II. The metabolism of cystine, cysteine, methionine, and glutathione,
109, 69
- and —. Cystinuria. III. The metabolism of serine,
109, 545
- See BLOCK and BRAND,
109, viii
- , Cahill, George F., and Block, Richard J. Cystinuria. IV. The metabolism of homocysteine and homocystine,
110, 399
- See GREEN, MORRIS, CAHILL, and BRAND,
114, 91
- See BLOCK, BRAND, HARRIS, and HINSIE,
114, xii
- and Cahill, George F. Canine cystinuria. III,
114, xv
- See BLOCK, BRAND, and CAHILL,
119, xii
- , Block, Richard J., and Cahill, George F. Some observations

Brand, Erwin—*continued*

on the source of urinary cystine in cystinuria,

119, xiv

—, —, Kassel, Beatrice, and Cahill, George F. Cystinuria.

V. The metabolism of casein and lactalbumin, 119, 669

—, —, and Cahill, George F. Cystinuria. VI. The metabolism of the hydroxy analogue of methionine (*dl*- α -hydroxy- γ -methiobutyric acid),

119, 681

—, —, and —. VII. The metabolism of S-methylcysteine, of γ -thiobutyric acid, and of γ , γ '-dithiodibutyric acid,

119, 689

—. Growth response to sulfur amino acids, 123, xv

—, Cahill, George F., and Slanetz, Charles A. Canine cystinuria. IV, 123, xvi

—. See KASSELL and BRAND, 125, 115, 131, 145

—, Cahill, George F., and Kassel, Beatrice. Cystinuria. VIII. The metabolism of crystalline egg albumin,

125, 415

—. See KASSELL, CAHILL, and BRAND, 125, 423

—. See KASSELL and BRAND, 125, 435

Brand, F. C. See BRAND, BRAND, and HERRMANN,

105, xiii

Bratton, A. Calvin. See McCLENDON, BRATTON, and WHITE, 119, lxvii

—. See McCLENDON and BRATTON, 123, 699

Braun, Charles E., and Rees, Francis M. An examination of the Sullivan colorimetric test for guanidine,

114, 415

Brekhus, P. J. See ARMSTRONG and BREKHUS, 120, 677

Breusch, Fritz L. See SCHÖNHEIMER and BREUSCH,

103, 439

—. The fate of the plant sterols in the intestinal tract,

124, 151

Brewer, George. See LARSON and BREWER, 115, 279

Bridwell, E. G. See HARGER, JOHNSON, and BRIDWELL,

123, p. 1

Briggs, A. P. Excretion of ammonia and neutrality regulation, 104, 231

—. The relation of ammonia secretion to the acid-base balance of the urine in different types of nephritis, 109, xii

—. Excretion of fixed base during the alkalosis of overventilation, 119, xv

Brinkhous, K. M. See SEEGER, SMITH, WARNER, and BRINKHOUS, 123, 751

Brock, Henry J. See HUBBARD and BROCK, 110, 411

Brocklesby, H. N., and Kuchel, C. C. The adsorption of vitamin A by sodium and potassium soaps when formed *in situ* in highly potent oils,

123, xvi

Brodie, Bernard B., and Friedman, Max M. The determination of thiocyanate in tissues, 120, 511

- and —. The determination of bromide in tissues and biological fluids, 124, 511
- Bromund, Werner H.** See HOLMES and BROMUND, 112, 437
- Brook, Theodore.** See FRIEDEMANN and BROOK, 114, xxxvii
- . See FRIEDEMANN, 123, 161
- Brooke, Richard O., Smith, Arthur H., and Smith, Paul K.** Inorganic salts in nutrition. VII. Change in composition of bone of rats on a diet poor in inorganic constituents, 104, 141
- Brookes, Margaret Hessler.** See COHN and BROOKES, 114, 139
- Browman, Audra A., and Hastings, A. Baird.** Solubility of aragonite in salt solutions, 119, 241
- Brown, Barker H.** See LEWIS, BROWN, and WHITE, 114, 171
- . See LEWIS and BROWN, 123, lxxv
- Brown, J. B.** See BOSWORTH and BROWN, 103, 115
- . See AULT and BROWN, 107, 607, 615
- Brown, R. W.** See OSBURN, BROWN, and WERKMAN, 121, 685
- Brown, W. L.** A contribution to the chemistry of pepper pigments. The red pigment in the Perfection pimiento (*Capsicum annuum*), 110, 91
- . The influence of pimiento pigments on the color of the egg yolk of fowls, 122, 655
- Brown, W. R.** The hydrolysis of starch by hydrogen peroxide and ferrous sulfate, 113, 417
- and **Burr, George O.** Some recent studies on fat deficiency, 114, xvi
- Browne, J. S. L.** See VENNING, EVELYN, HARKNESS, and BROWNE, 120, 225
- Bruce, William F.** The decomposition of citric acid by *Bacillus aertrycke*, 107, 119
- Bruch, Ernst.** See PERLZWEIG, KONDRITZER, and BRUCH, 123, xcii
- Bruger, Maurice, and Poindexter, Charles A.** The effect of the ingestion of water and of urea on the cholesterol content of the plasma, 101, 21
- . The relation between the cholesterol partition and the total protein content in pathological body fluids. The state of cholesterol in such fluids, 105, xiii
- . The state of cholesterol and the nature of the cholesterol-protein complex in pathological body fluids, 108, 463
- . See MATTICE, BRUGER, and DEREN, 109, lx
- . See FITZ and BRUGER, 113, 297
- . 114, xxxv
- Bryan, Hilah F.** See MACHT and BRYAN, 110, 101

- Bryan, W. Ray.** See **KNUDSON**, **STURGES**, and **BRYAN**, 123, lxx
- Buchanan, B. F.** See **WHISTLER** and **BUCHANAN**, 125, 557
- Buchanan, Kathryn Sue.** See **SURE**, **KIK**, and **BUCHANAN**, 108, 11, 19, 27
- Buchwald, K. W., Cori, Carl F., and Fisher, Robert E.** The influence of *l*- and *d*-lactate on oxygen consumption of rabbits, 103, 763
- Buell, Mary V., and Strauss, Margaret B.** Liver function in experimental hyperthyroidism, 105, xiv
- The adenine nucleotide content of human blood. I. Determination and content, 108, 273
- The relation of adenine nucleotide to hemoglobin, hematocrit, and red cell count in human blood, 109, xii
- The adenine nucleotide content of human blood. II. Correlation with hemoglobin, 112, 523
- , **Anderson, Ian A., and Strauss, Margaret B.** On carbohydrate metabolism in adrenalectomized animals, 114, xvi
- Bull, Henry B.** See **NEURATH** and **BULL**, 115, 519
- and **Neurath, Hans.** The denaturation and hydration of proteins. II. Surface denaturation of egg albumin, 118, 163
- Studies on surface denaturation of egg albumin, 123, 17
- and **Neurath, Hans.** Surface denaturation of egg albumin. A reply, 125, 113
- Monolayers of denatured egg albumin, 125, 585
- Bunim, Joseph J., Smith, Willie W., and Smith, Homer W.** The diffusion coefficient of inulin and other substances of interest in renal physiology, 118, 667
- Bunker, John W. M.** See **HARRIS** and **BUNKER**, 119, xlv
- Burk, Norval F.** Osmotic pressure, molecular weight, and stability of amandin and excelsin and certain other proteins, 120, 63
- Osmotic pressure, molecular weight, and stability of serum globulin, 121, 373
- Osmotic pressure, molecular weight, and stability of gliadin, 124, 49
- Burke, J. C.** See **McINTYRE** and **BURKE**, 119, lxxviii
- and **McIntyre, A. R.** Growth-promoting pituitary extract in thiamine deficiency, 123, xvii
- Burkhart, Bernard, Baur, Lorenz, and Link, Karl Paul.** A micromethod for the determination of uronic acids, 104, 171
- Burmester, Ben R.** An investigation of a method for iron determination in blood, 105, 189

- See ALMQUIST, LORENZ, and BURMESTER, 106, 365
- Burr, George O. See BROWN and BURR, 114, xvi
- See KASS, MILLER, and BURR, 123, lxvi
- Burrell, R. C., and Walter, E. D. A saponin from the soy bean, 108, 55
- Burrows, W. H., Fritz, J. C., and Titus, Harry W. The blood sugar of the fasting, gizzard-ectomized fowl (*Gallus domesticus*), 110, 39
- Butler, Allan M., and MacKay, Eaton M. The influence of the sodium and potassium content of the diet upon the sodium concentration of human centrifuged red blood cells, 106, 107
- , Blatt, Hester, and Southgate, Harriet. The solubility of the plasma proteins. II. Dependence on pH, temperature, and lipid content in concentrated solutions of potassium phosphate and application to their separate precipitation, 109, 755
- See MINDLIN and BUTLER, 122, 673
- Butler, Gordon Cecil. See MARRIAN and BUTLER, 119, lxvi
- and Marrian, Guy Frederic. The isolation of pregnane-3,17,20-triol from the urine of women showing the adreno-genital syndrome, 119, 565
- and —. Chemical studies on the adreno-genital syndrome. I. The isolation of 3(α)-hydroxyetiocholane-17-one, 3(β)-hydroxyetioallocholane-17-one (isoandrosterone), and a new triol from the urine of a woman with an adrenal tumor, 124, 237
- Butt, Hugh R. See KEYS and BUTT, 123, lxviii
- Butts, Joseph S., Cutler, Charles H., and Deuel, Harry J., Jr. The sexual variation in carbohydrate metabolism. VI. The rôle of the anterior pituitary in the metabolism of diacetic acid, 105, 45
- Studies on ketosis. IV. The comparative ketolytic effect of galactose, glucose, and lactose in rats, 105, 87
- Quantitative studies on β oxidation, 105, xv
- , Cutler, Charles H., Hallman, Lois F., and Deuel, Harry J., Jr. Studies on ketosis. VI. Quantitative studies on β oxidation, 109, 597
- and Dunn, Max S. The metabolism of glycine and alanine, 109, xiii
- See DEUEL, BUTTS, HALLMAN, and CUTLER, 112, 15
- , Dunn, Max S., and Hallman, Lois F. Studies in amino acid metabolism. I. Fate of glycine, *dl*-alanine, and *d*-alanine in the normal animal, 112, 263
- See DEUEL, HALLMAN, BUTTS, and MURRAY, 116, 621

Butts, Joseph S.—*continued*

—, See DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT,

117, 119

—, Blunden, Harry, Goodwin, Willard, and Deuel, Harry J., Jr. Studies on ketosis. X. Glycogen synthesis after ethyl esters of various fatty acids,

117, 131

—, —, and Dunn, Max S. Studies in amino acid metabolism. II. Fate of *d*-glutamic, *dl*-glutamic, *dl*-pyroglutamic, *l*-aspartic, and *dl*-aspartic acids in the normal animal,

119, 247

—, Dunn, Max S., and Blunden, Harry. The metabolism of *d*- and *dl*-glutamic acids, *l*- and *dl*-aspartic acids, *dl*-pyroglutamic acid,

119, xv

—, See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN,

119, 617

—, Blunden, Harry, and Dunn, Max S. Studies in amino acid metabolism. III. The fate of *dl*-leucine, *dl*-norleucine, and *dl*-isoleucine in the normal animal,

120, 289

—, See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN,

123, 257

—, Dunn, Max S., and Hallman, Lois F. Studies in amino acid metabolism. IV. Metabolism of *dl*-phenylalanine and *dl*-tyrosine in the normal rat,

123, 711

—, Blunden, Harry, and Dunn, Max S. Studies in amino acid metabolism. V. The metab-

olism of *l*-cystine and *dl*-serine in the normal animal,

124, 709

Butz, Lewis W., and Hall, S. R. Male hormone in the urine of bulls and rams,

119, xvi

Bywater, W. G. See DOX, BYWATER, and TENDICK,

112, 425

C

Cahill, George F. See BRAND, CAHILL, and HARRIS,

109, 69

—, See BRAND and CAHILL,

109, 545

—, See BRAND, CAHILL, and BLOCK,

110, 399

—, See GREEN, MORRIS, CAHILL, and BRAND,

114, 91

—, See BRAND and CAHILL,

114, xv

—, See BLOCK, BRAND, and CAHILL,

119, xii

—, See BRAND, BLOCK, and CAHILL,

119, xiv

—, See BRAND, BLOCK, KASSELL, and CAHILL,

119, 669

—, See BRAND, BLOCK, and CAHILL,

119, 681, 689

—, See BRAND, CAHILL, and SLANETZ,

123, xvi

—, See BRAND, CAHILL, and KASSELL,

125, 415

—, See KASSELL, CAHILL, and BRAND,

125, 423

Cahill, William M., and Jackson, Richard W. Proof of synthesis and configurational relationships of abrine, the naturally occurring amino-N-methyltryptophane,

123, xviii

- Cajori, F. A.** The lactase activity of the intestinal mucosa of the dog and some characteristics of intestinal lactase, 109, 159
- and **Karr, Walter G.** The absorption of glucose and galactose from the intestine of the dog, 109, xiv
- Caldwell, C. G., and Hixon, R. M.** A study of the periodic acid oxidation of starches and dextrans as a means of determining molecular size, 123, 595
- Caldwell, Clyde T., and Rose, William C.** Feeding experiments with mixtures of highly purified amino acids. IV. The supplementing effect of casein fractions obtained by the carbamate procedure, 107, 45
- and —. V. Additional properties of the unknown growth essential present in proteins, 107, 57
- Caldwell, M. L.** See **SHERMAN, CALDWELL, and DOEBBELING**, 104, 501
- and **Doebbeling, S. E.** A study of the concentration and properties of two amylases of barley malt, 110, 739
- and **Hildebrand, F. C.** A method for the direct and quantitative study of amyloclastic activity of amylases, 111, 411
- and **Doebbeling, S. E.** A study of the influence of heavy water upon amylase formation during the sprouting of barley, 114, xvii
- and —. A study of the influence of heavy water upon amylase formation in barley, 123, 479
- Callan, Thomas P.** See **TOENNIES and CALLAN**, 125, 259
- Calvery, Herbert O.** Crystalline egg albumin. The hydrolysis of crystalline egg albumin by pepsin, papain-hydrocyanic acid, and pancreatic proteinase and the subsequent action of some other enzymes on the hydrolysis products produced by these enzymes, 102, 73
- and **Titus, Harry W.** The composition of the proteins of eggs from hens on different diets, 105, 683
- and **Block, Walter D.** The specificity of the enzyme arginase, 107, 155
- and **Freyberg, Richard H.** Some analyses of samples of Bence-Jones protein, 109, 739, xv
- , **Heidelberger, Michael, and Kendall, Forrest E.** Chemical analysis of Type II pneumococcus specific precipitate, 109, xv
- , **Herriott, Roger M., and Northrop, John H.** Some analyses of crystalline pepsin, 109, xvi
- and **Schock, Ellen D.** Peptic hydrolysis of egg albumin, 109, xvi
- . Analysis of Type I pneumococcus specific precipitate, 112, 167
- . Crystalline egg albumin.

Calvery, Herbert O.—*continued*

- II. The fractionation of peptic hydrolysis products,
112, 171
- , **Herriott, Roger M.**, and **Northrop, John H.** The determination of some amino acids in crystalline pepsin,
113, 11
- and **Schock, Ellen D.** Crystalline egg albumin. III. Fractionation of peptic hydrolysis products by dialysis,
113, 15
- , **Block, Walter D.**, and **Schock, Ellen D.** Crystalline egg albumin. IV. The rate of liberation of amino nitrogen and cystine, tyrosine, and tryptophane colorigenic values during peptic, acid, and alkaline hydrolysis of egg albumin,
113, 21
- See **MILLER and CALVERY**,
116, 393
- Campbell, Dan H.** The separation of glycogen into two fractions,
119, xvii
- Campbell, H. L.**, **Bessey, Otto A.**, and **Sherman, H. C.** Adult rats of low calcium content,
110, 703
- Campbell, Harold A.**, and **Link, Karl Paul.** Derivatives of *d*-galacturonic acid. III. The synthesis of a mercaptal of *d*-galacturonic acid and aldehyde tetraacetylmethyl-*d*-galacturonate,
120, 471
- and —. Acetals in the sugar group. I. The dimethyl acetal of *d*-galactose,
122, 635

- Campbell, Percy A.** See **HOLMES, PIGOTT, and CAMPBELL**,
103, 657
105, xli
- Campbell, Walter R.**, and **Hanna, Marion I.** The determination of nitrogen by modified Kjeldahl methods,
119, 1
- and —. Sulfites as protein precipitants,
119, 9
- and —. The albumin, globulins, and fibrinogen of serum and plasma,
119, 15
- Cannan, R. Keith.** See **WILSON and CANNAN**,
119, 309
- Cape, Jane**, and **Sevringhaus, Elmer L.** The rate of change of alkali reserve after ingestion of salts of organic compounds. I. Normal variations in acid-base balance under basal conditions,
103, 257
- The rate of change of alkali reserve after ingestion of salts of organic compounds,
109, xvii
- and **Sevringhaus, Elmer L.** The rate of change of alkali reserve after ingestion of salts of organic compounds. II. Rate of change of alkali reserve after ingestion of sodium citrate and sodium bicarbonate,
121, 549
- Caplan, M.** See **BEUTNER, CAPLAN, and LOEHR**,
101, 391
- Cardon, Rose.** See **HOFFMAN and CARDON**,
109, 717
- Carey, Benjamin W., Jr.** See **MADDOCK, TRIMBLE, and CAREY**,
103, 285
- Carpenter, Thorne M.** Some considerations on precise anal-

- ysis of air from respiration chambers, 101, 595
- A chemical hygrometer, 112, 123
- The partition of urinary nitrogen of fasting and hibernating woodchucks (*Arctomys monax*), 122, 343
- Carr, C. Jelleff, Musser, Ruth, Schmidt, Jacob E., and Krantz, John C., Jr. The fate of mannitol and mannitan in the animal body, 102, 721
- and Krantz, John C., Jr. The fate of dulcitol and dulcitan in the animal body, 107, 371
- , Forman, Sylvan E., and Krantz, John C., Jr. The metabolism of mannitol, polygalitol, and styracitol, 123, xviii
- and Krantz, John C., Jr. Sugar alcohols. XII. The fate of polygalitol and mannitol in the animal body, 124, 221
- Carruthers, Albert, and Lee, Wei Yung. The hydrolysis of glycogen by glycerol extract of muscle, 108, 525
- The hydrolysis of glycogen by muscle and liver extracts, 108, 535
- Carruthers, Christopher. Vitamin E and experimental tumors, 123, xix
- Carter, Herbert E. The metabolism of norleucine, isoleucine, and valine. I. The synthesis of some phenyl derivatives, 108, 619
- See ROSE, MCCOY, MEYER, CARTER, WOMACK, and MERTZ, 109, lxxvii
- Synthesis of α -amino- β -hydroxy-*n*-butyric acids, 112, 769
- See SCHILTZ and CARTER, 116, 793
- See WOOD, MADDEN, and CARTER, 117, 1
- See WEST and CARTER, 119, 103, 109
- See WEST, KRUMMEL, and CARTER, 122, 605
- See WEST and CARTER, 122, 611
- , Handler, Philip, Binkley, Francis, Fishback, Hamilton, Risser, William, and Weisiger, James. Amide metabolism, 123, xx
- Cartland, George F., Meyer, Roland K., Miller, Lloyd C., and Rutz, Marshall H. A comparison of theelin prepared from stallion urine, human urine, and from theelol, with notes on the colorimetric estimation of theelin and theelol, 109, 213
- and —. A study of equilin prepared from pregnant mare urine, 112, 9
- See MEYER, MILLER, and CARTLAND, 112, 597
- and Kuizenga, Marvin H. The preparation of extracts containing the adrenal cortical hormone, 116, 57
- and Nelson, John W. The preparation and purification of extracts containing the gonad-stimulating hormone of pregnant mare serum, 119, 59
- Cary, C. A. See WISEMAN, KANE, and CARY, 105, ci

Cary, C. A.—*continued*

— See WISEMAN and CARY,
109, ci

— See SHINN and CARY,
114, xcii

— See SHINN, KANE, WISE-
MAN, and CARY,
119, lxxxix

Cary, M. Katherine. See BLOCK,
DARROW, and CARY,
104, 347

— See DARROW and CARY,
105, 327

— See YANNET, DARROW, and
CARY,
112, 477

**Cason, James, and Anderson,
R. J.** The chemistry of the
lipids of tubercle bacilli. I.
The occurrence of phthiocerolin
the wax of the bovine tubercle
bacillus, 119, 549

**Catherwood, Ruth, and Stearns,
Genevieve.** Creatine and
creatinine metabolism in in-
fancy and childhood,
114, xviii

— and —. Creatine and creat-
inine excretion in infancy,
119, 201

**Cavett, J. W., Rice, Carl O., and
McClendon, J. F.** The thy-
roxine and iodine content of
normal and pathological thyro-
globulin, 109, xvii

—, —, and —. Thyroglobulin
studies. I. The thyroxine and
iodine content of normal and
goitrous human thyroglobulin,
110, 673

— Thyroglobulin studies. II.
The Van Slyke nitrogen dis-
tribution and tyrosine and
tryptophane analyses for nor-

mal and goitrous human thyro-
globulin, 114, 65

— The use of nembutal in the
determination of the basal
metabolic rate of dogs,
119, xvii

Cerecedo, Leopold R. See AL-
LEN and CERECEDO,
102, 313

— See SCHWOB and CERECEDO,
105, lxxvi

— See STEKOL and CERECEDO,
105, lxxxv

— and Allen, Frank Worthington.
Studies on purine metabolism.
III. The fate of guanosine and
adenosine in the dog,
107, 421

— and Stekol, Jakob A. Studies
on metabolic processes during
growth. I. The metabolism of
isobarbituric acid in the grow-
ing dog, 107, 425

— See SILVER and CERECEDO,
114, xciii

Chaikelis, Alexander Sarant.
The effect of insulin on the
glucose-chloride relationship
and anhydremia in the blood
of rabbits, 105, 767

Chaikoff, I. L., and Kaplan, A.
The blood lipids in completely
depancreatized dogs main-
tained with insulin,
106, 267

— See KAPLAN and CHAIKOFF,
108, 201

— See LARSON and CHAIKOFF,
108, 457

— and Larson, P. S. The effect
of insulin on the purine metab-
olism of the Dalmatian coach-
dog, 109, 85

- , —, and **Read, Lee S.** The influence of epinephrine on the purine metabolism of ordinary and Dalmatian breeds of dogs, 109, 395
- and **Kaplan, A.** The influence of the ingestion of raw pancreas upon the blood lipids of completely depancreatized dogs maintained with insulin, 112, 155
- See **KAPLAN** and **CHAIKOFF**, 116, 663
- and **Kaplan, A.** The distribution of fat in the livers of depancreatized dogs maintained with insulin, 119, 423
- See **KAPLAN** and **CHAIKOFF**, 119, 435
120, 647
- See **PERLMAN**, **RUBEN**, and **CHAIKOFF**, 122, 169
- See **LORENZ**, **ENTENMAN**, and **CHAIKOFF**, 122, 619
- See **LORENZ**, **CHAIKOFF**, and **ENTENMAN**, 123, 577
- See **FRIES**, **RUBEN**, **PERLMAN**, and **CHAIKOFF**, 123, 587
- See **HASSID** and **CHAIKOFF**, 123, 755
- See **ENTENMAN**, **RUBEN**, **PERLMAN**, **LORENZ**, and **CHAIKOFF**, 124, 795
- Chamberlin, P. E.**, **Ferguson, W. H.**, and **Hall, V. E.** Ketone body excretion in the cat: sex difference, and influence of diet, fasting, castration, and male hormone administration, 121, 599
- Chambers, Leslie A.**, and **Flossdorf, Earl W.** The denaturation of proteins by sound waves of audible frequencies, 114, 75
- The influence of intense mechanical vibration on the proteolytic activity of pepsin, 117, 639
- Chambers, William H.**, **Himwich, Harold E.**, and **Kennard, Margaret A.** Glucose excretion after exercise in experimental diabetes, 108, 217
- See **BARKER**, **CHAMBERS**, and **DANN**, 118, 177
- Chamelin, I. M.** See **HARROW**, **MAZUR**, **CHAMELIN**, and **LESUK**, 119, xlvii
- Chandler, W. L.** See **HASSID** and **CHANDLER**, 117, 203
- Chang, Chang Y.** See **PHILLIPS** and **CHANG**, 105, 405
- Chanutin, Alfred**, and **Ludewig, Stephan.** The effect of cholesterol ingestion on tissue lipids of rats, 102, 57
- See **KINARD** and **CHANUTIN**, 103, 461
- and **Ludewig, Stephan.** Renal function studies in partially nephrectomized rats, 109, xviii
- and —. Influence of liver damage on the blood lipids, 114, xviii
- and —. The blood plasma cholesterol and phospholipid phosphorus in rats following partial hepatectomy and following ligation of the bile duct, 115, 1
- See **LUDEWIG** and **CHANUTIN**, 115, 327

Chanutin, Alfred—continued

- and Ludewig, Stephan. Blood plasma proteins in partially nephrectomized rats, 119, xviii
- , Hortenstine, J. C., Cole, W. S., and Ludewig, Stephan. Blood plasma proteins in rats following partial hepatectomy and laparotomy, 123, 247
- The distribution of body water in the partially nephrectomized rat, 123, xx
- See HORTENSTINE, CHANUTIN, and LUDEWIG, 125, 455
- Chao, Iping. See ENGEL and CHAO, 108, 389
- Chargaff, Erwin, and Schaefer, Werner. Chemical and immunological properties of the various fractions of the bacillus Calmette-Guérin (BCG), 109, xix
- and —. A specific polysaccharide from the bacillus Calmette-Guérin (BCG), 112, 393
- , Bancroft, Frederic W., and Stanley-Brown, Margaret. Studies on the chemistry of blood coagulation. I. The measurement of the inhibition of blood clotting. Methods and units, 115, 149
- , —, and —. II. On the inhibition of blood clotting by substances of high molecular weight, 115, 155
- , —, and —. III. The chemical constituents of blood platelets and their rôle in blood clotting, with remarks on the activation of clotting by lipids, 116, 237

- The separation of choline and ethanolamine, 118, 417
- and Bovarnick, M. A method for the isolation of glucosamine, 118, 421
- Studies on the chemistry of blood coagulation. IV. Lipid inhibitors of blood clotting occurring in mammalian tissue, 121, 175
- V. Synthetic cerebroside sulfuric acids and their action in blood clotting, 121, 187
- and Olson, Kenneth B. Studies on the chemistry of blood coagulation. VI. Studies on the action of heparin and other anticoagulants. The influence of protamine on the anticoagulant effect *in vivo*, 122, 153
- Chemical properties of the lipid fractions of *Bacterium tumefaciens*, 123, xxi
- and Levine, Michael. The lipids of *Bacterium tumefaciens*, 124, 195
- The protamine salts of phosphatides, with remarks on the problem of lipoproteins, 125, 661
- Studies on the chemistry of blood coagulation. VII. Protamines and blood clotting, 125, 671
- VIII. Isolation of a lipid inhibitor of blood clotting from the spleen in a case of Niemann-Pick's disease, 125, 677
- Charles, A. F., and Scott, D. A.

- Studies on heparin. I. The preparation of heparin, 102, 425
- and —. II. Heparin in various tissues, 102, 431
- . See SCOTT and CHARLES, 102, 437
- Chase, Barbara W., and Lewis, Howard B. The metabolism of sulfur. XX. The rate of absorption of *dl*-methionine from the gastrointestinal tract of the white rat, 101, 735
- and —. Comparative studies of the metabolism of the amino acids. VI. The rate of absorption of leucine, valine, and their isomers from the gastrointestinal tract of the white rat, 106, 315
- Chen, A. Ling. See CHEN and CHEN, 105, 231
109, 681
111, 653
- Chen, K. K., and Chen, A. Ling. The constituents of be-still nuts, *Thevetia nerifolia*, 105, 231
- and —. The alkaloids of han-fang-chi, 109, 681
- and —. The alkaloid of chin-shih-hu, 111, 653
- . See JENSEN and CHEN, 116, 87
- Chen, Tung-Tou. See BALL and CHEN, 102, 691
- Chen, Yen Ping. See FREEMAN and CHEN, 123, 239
- . See FREEMAN, CHEN, and IVY, 124, 79
- Chichester, Donald F. See MORGAN and CHICHESTER, 110, 285
- Childs, Hazel M. See LOONEY and CHILDS, 104, 53
105, liii
- Chornock, Francis. See GUERANT, CHORNOCK, and DUTCHER, 119, xlii
- Chow, Bacon F. See CONANT, CHOW, and SCHOENBACH, 101, 463
- and Kamerling, S. E. The catalytic effect of ferricyanide in the oxygen absorption of oleic acid, 104, 69
- Christensen, E. Hohwü, and Dill, D. B. Oxygen dissociation curves of bird blood, 109, 443
- Christensen, Halvor N., and Corley, Ralph C. Observations on the alleged presence of lipid chlorine in the blood and tissues, 123, 129
- Christensen, L. M. See STAVELY, CHRISTENSEN, and FULMER, 111, 771, 785, 791
- Christensen, W. Blake, Peterson, W. H., and Johnson, Marvin J. Properties of the lactic acid-racemizing enzyme (racemase) of *Clostridium butylicum*, 123, xxi
- Christman, A. A., and Randall, E. L. A convenient and accurate method for the determination and detection of carbon monoxide in blood, 102, 595
- . See TULANE, CHRISTMAN, and LEWIS, 103, 141
- and Block, Walter D. A method for the detection and determination of carbon monoxide in air, 109, xx

- Christman, Clarence C.** See
LEVENE and CHRISTMAN,
120, 575
122, 203, 661
123, 77, 83, 607
— and Levene, P. A. Synthesis
of proteinogenic alcamines and
their N-dialkyl derivatives,
124, 453
— and —. Proteinogenic alkyl
alcamines. II, 125, 709
Church, Anna E. See SURE, KIK,
and CHURCH, 103, 417
Church, Charles F. See WHIP-
PLE and CHURCH,
109, xcvi
114, cvii
119, ciii
Cipriani, A. J. See EVELYN and
CIPRIANI, 117, 365
Civin, Helen. See HECHT and
CIVIN, 116, 477
**Clark, Guy W., and Coene, Alice
M.** Evaluation of the anti-
anemic potency of liver extract
by the Jacobson method of
bioassay, 114, xix
Clark, Harold E. See VICKERY,
PUCHER, and CLARK,
109, 39
— See PUCHER, CLARK, and
VICKERY, 117, 599, 605
Clark, R. H. See PYLE, FISHER,
and CLARK, 119, 283
Clark, W. Mansfield. See BALL
and CHEN, 102, 691
— John Jacob Abel,
124, preceding p. 573
Clarke, H. T. See ZAHND and
CLARKE, 102, 171
— See HERBST and CLARKE,
104, 769
— See FRUTON and CLARKE,
106, 667
— See GURIN and CLARKE,
107, 395
— See BLUMENTHAL and
CLARKE, 110, 343
— See MAZUR and CLARKE,
123, 729
— See BLOCH and CLARKE,
125, 275
— See BOREK and CLARKE,
125, 479
**Clausen, S. W., and McCoord,
A. B.** The distribution of
vitamin A in the tissues of the
rat and of the guinea pig,
105, xv
— and —. Conditions influenc-
ing the storage of vitamin A in
the rat, 109, xx
— and —. The determination
of carotene and xanthophyll
by a single distribution be-
tween liquid phases,
113, 89
— and —. The utilization of
carotene by the human fetus,
119, xviii
Clemence, Leroy W. See RAI-
ZISS, SEVERAC, MOETSCH, and
CLEMENCE, 123, xcix
**Clifcorn, L. E., Meloche, V. W.,
and Elvehjem, C. A.** The
absorption of carbon monoxide
with reduced hematin and
pyridine hemochromogen,
111, 399
**Clinton, Marshall, Jr., and Hub-
bard, Roger S.** Factors in-
fluencing the destruction of
glucose and fructose by oxygen,
119, 467

- Closs, John O.** See **CORI, CLOSS,**
and **CORI,** 103, 13
- Clowes, G. H. A., and Krahl, M. E.** Action of certain oxidative
stimulants and depressants on
respiration and cell division,
109, xxi
— See **KRAHL** and **CLOWES,**
111, 355
— and **Krahl, M. E.** Studies on
the mechanism of metabolic
stimulation by dinitro-, dihalo-,
and trihalophenols,
114, xix
— See **KRAHL** and **CLOWES,**
119, lx
—, **Davis, W. W., and Krahl,**
M. E. Certain reactions of
protein films prepared by the
Langmuir method,
123, xxii
- Cockrill, Jessie R., Miller, Edgar**
G., Jr., and Kurzrok, Raphael.
The nature of the uterus-
contracting substance in
human seminal fluid,
105, xvi
- Coene, Alice M.** See **CLARK**
and **COENE,** 114, xix
- Coffman, J. R.** See **PETERSON,**
HOSKINS, COFFMAN, and
KOCH, 123, xciii
- Cogan, Michael.** See **ROBIN-**
SON, 108, 403
- Coghill, Robert D.** The spon-
taneous decomposition of cyste-
ine dimethyl ester,
114, xx, 419
— and **Creighton, M. M.** The
non-specific nature of the car-
bohydrate portion of horse
pseudoglobulin, 123, xxiii
- Cohen, Barnett.** See **SHWACH-**
MAN, HELLERMAN, and COHEN,
107, 257
- Cohen, Eugene.** See **ELVE-**
HJEM, COHEN, and STARE,
105, xxv
— and **Elvehjem, C. A.** The
relation of iron and copper to
the cytochrome and oxidase
content of animal tissues,
107, 97
- Cohen, Julius.** See **SOBEL,**
YUSKA, and COHEN,
118, 443
- Cohen, Philip P.** Studies in
ketogenesis, 119, 333
— and **Stark, Irene E.** Hepatic
ketogenesis and ketolysis in
different species,
123, xxiii
— See **STARK** and **COHEN,**
123, cxv
- Cohen, S. L.** See **MARRIAN,**
COHEN, and WATSON,
109, lix
- Cohn, Edwin J., Edsall, John T.,**
and **Blanchard, Muriel H.**
Studies in the physical chem-
istry of the proteins. XI.
The amphoteric properties of
zein, 105, 319
— See **STRAUP-COPE** and
COHN, 105, lxxxvii
— See **GREEN, COHN, and**
BLANCHARD, 109, 631
—, **McMeekin, Thomas L., and**
Greenstein, Jesse P. The
solvent action of neutral salts
upon peptides in solutions of
low dielectric constant,
109, xxi
— See **FERRY, COHN, and**
NEWMAN, 109, xxxii

- Cohn, Edwin J.**—*continued*
- and **McMeekin, Thomas L.**
On the relation between the solubility in different solvents of amino acids, peptides, and certain related substances,
114, xx
 - See **FERRY, COHN, and NEWMAN**,
114, xxxiv
 - , **Salter, William T., and Ferry, Ronald M.** The amphoteric properties of globin and iodized globin,
123, xxiv
 - Cohn, Essie White, and White, Abraham.** The enzymatic hydrolysis of raw and heat-treated egg white,
109, 169
 - and **Brookes, Margaret Hessler.** The diastatic activity of rat saliva,
114, 139
 - Cohn, Waldo E., and Greenberg, David M.** Studies in mineral metabolism with the aid of artificial radioactive isotopes. I. Absorption, distribution, and excretion of phosphorus,
123, 185
 - Cole, Versa V., and Curtis, George M.** Normal iodine balance,
105, xvii
 - and —. Iodine balance studies on the white rat,
109, xxii
 - and **Harned, Ben K.** Further evidence of diabetic tendencies in a strain of rats,
123, xxv
 - See **HARNED and COLE**,
123, li
 - Cole, W. S.** See **CHANUTIN, HORTENSTINE, COLE, and LUDEWIG**,
123, 247
 - Collier, Vines, Jr.** Determination of chlorides in biological materials,
115, 239
 - Colowick, Sidney P.** See **CORI, CORI, and COLOWICK**,
119, xix
 - See **CORI, COLOWICK, and CORI**,
121, 465
123, 375, 381
124, 543
 - **Synthetic mannose-1-phosphoric acid and galactose-1-phosphoric acid**,
124, 557
 - Compton, Jack.** See **LEVENE and COMPTON**,
111, 325, 335
112, 775
114, 9
116, 169, 189
117, 37
 - Conant, James B., Chow, Bacon F., and Schoenbach, E. B.** The oxidation of hemocyanin,
101, 463
 - , **Dersch, Fritz, and Mydans, W. E.** The prosthetic group of *Limulus* hemocyanin,
107, 755
 - Conner, R. T., and Sherman, H. C.** Some aspects of protein intake in relation to growth and rate of calcification,
115, 695
 - See **KAO, CONNER, and SHERMAN**,
123, 221
 - Conrad, Ralph M., and Berg, Clarence P.** The optical inversion of *d*-histidine in the animal body,
117, 351
 - Consolazio, W. V.** See **KEYS**,
114, 449
 - See **DILL, EDWARDS, and CONSOLAZIO**,
118, 635

- See DILL, TALBOTT, and CONSOLAZIO, 118, 649
119, xxiii
- Converse, H. T. See TURNER, MEIGS, and CONVERSE, 114, civ
- Conway, William J. The synthesis of *p*-bromophenylmercapturic acid in the fasting rabbit, 121, 27
- Cook, Gladys M. See MITCHELL and COOK, 123, lxxxvi
- Cool, Raymond D., Gamble, Clarence James, and Starr, Isaac, Jr. The solubility of ethyl iodide in human blood and its correlation with the erythrocyte count, 105, 97
- Cooley, Thomas B. See ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY, 109, xxx
- Coolidge, Thomas B. The mechanism of cytochrome action, 123, 451
- Coons, Callie Mae, Coons, R. R., and Schiefelbusch, Anna T. The acid-base balance of the minerals retained during human pregnancy, 104, 757
- Coons, R. R. See COONS, COONS, and SCHIEFELBUSCH, 104, 757
- Cope, Frances. See ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY, 109, xxx
- Corey, Edward L. See EHRENSTEIN and COREY, 122, 297
- Corey, Robert B., and Wyckoff, Ralph W. G. Long spacings in macromolecular solids, 114, 407
- See WYCKOFF and COREY, 116, 51
- Cori, Carl F. See CORI, CLOSS, and CORI, 103, 13
- See BUCHWALD, CORI, and FISHER, 103, 763
- See CORI and CORI, 105, xvii
107, 5
- and Shine, William M. The conversion of hexoses and trioses to glucose in the liver of the rat, 114, xxi
- See FISHER, RUSSELL, and CORI, 115, 627
- See CORI and CORI, 116, 119, 129
- , Cori, Gerty T., and Colowick, Sidney P. The isolation and synthesis of glucose-1-phosphoric acid, 119, xix
- , —, and Hegnauer, A. H. Resynthesis of muscle glycogen from hexosemonophosphate, 120, 193
- , Colowick, Sidney P., and Cori, Gerty T. The isolation and synthesis of glucose-1-phosphoric acid, 121, 465
- See CORI, COLOWICK, and CORI, 123, 375, 381
124, 543
- Cori, Gerty T., Closs, John O., and Cori, Carl F. Fermentable sugar in heart and skeletal muscle, 103, 13
- and Cori, Carl F. Changes in hexosemonophosphate in frog muscle, 105, xvii

Cori, Gerty T.—*continued*

- See HEGNAUER and CORI, 105, 691
- and Cori, Carl F. The disappearance of hexosemonophosphate from muscle under aerobic and anaerobic conditions, 107, 5
- and —. The formation of hexosephosphate esters in frog muscle, 116, 119
- and —. An unusual case of esterification in muscle, 116, 129
- See CORI, CORI, and COLOWICK, 119, xix
- See CORI, CORI, and HEGNAUER, 120, 193
- See CORI, COLOWICK, and CORI, 121, 465
- , Colowick, Sidney P., and Cori, Carl F. The formation of glucose-1-phosphoric acid in extracts of mammalian tissues and of yeast, 123, 375
- , —, and —. The action of nucleotides in the disruptive phosphorylation of glycogen, 123, 381
- , —, and —. The enzymatic conversion of glucose-1-phosphoric ester to 6-ester in tissue extracts, 124, 543
- Corley, Ralph C. See MARTIN and CORLEY, 105, lvii
- See TRIPP and CORLEY, 105, xciv
- , Kramer, Alice W., and Wolf, Paul A. Factors influencing the creatine content of the muscles, 109, xxiii
- , Tripp, John T., and Newton,

Edith R. The metabolism of bromine and of brominated fatty acids in the animal body, 109, xxiii

- and Leighty, John A. Catabolism of straight and branched chain amino and fatty acids in the normal and phlorhizinized dog, 114, xxii
- and Snyder, Fred H. Catabolism of amino acids with branched chains, 119, xx
- See LEIGHTY and CORLEY, 120, 331
- See SNYDER and CORLEY, 122, 491
- See CHRISTENSEN and CORLEY, 123, 129
- , Wolf, Paul A., and Nielsen, Ernest K. The amino acids essential for the adult animal, 123, xxvi
- Cornish, R. E. See EVANS, MURPHY, ARCHIBALD, and CORNISH, 108, 515
- Correll, John T., and Hughes, J. S. The relation of filtrable to non-filtrable calcium in chicken blood, 103, 511
- , Berg, Clarence P., and Cowan, Donald W. The influence of *l*- and *dl*-tryptophane and kynurenic acid administration on bile volume and composition, 109, xxiv
- , —, and —. Tryptophane metabolism. IX. The excretion of kynurenic acid in the bile and urine of the dog after the administration of kynurenic acid and *l*- and *dl*-tryptophane, 123, 151
- Cortese, Frank, and Bauman,

- Louis. A synthesis of conjugated bile acids. II. Glycodesoxycholic acid, 113, 779
- and Bashour, Joseph T. A synthesis of conjugated bile acids. III. Sodium taurocholate and sodium taurodesoxycholate, 119, 177
- Cowan, Donald W. See CORRELL, BERG, and COWAN, 109, xxiv
123, 151
- Cowgill, George R. See ROE, GILMAN, and COWGILL, 105, lxxii
- See STUART, BLOCK, and COWGILL, 105, 463
- See HORWITT and COWGILL, 119, li, 553
123, lxi
- Cox, Gerald J., and Berg, Clarence P. The comparative availability of *d*- and *l*-histidine for growth, 107, 497
- Cox, Warren M., Jr. The nutritive value of pure fatty acid esters, 103, 777
- and Imboden, Miriam. Studies on the requirements of calcium and phosphorus for gestation and lactation, 105, xviii
- and Mueller, Arthur J. An apparatus for milking small laboratory animals, and the composition of stock rat milk, 114, xxii
- See MUELLER and Cox, 119, lxxii
123, lxxxviii
- Craft, Harold A. See DU VIGNEAUD, CRAFT, and LORING, 104, 81
- See DU VIGNEAUD and CRAFT, 105, xcvi
- See DU VIGNEAUD, LORING, and CRAFT, 105, 481
107, 519
- Craig, F. N. A fat oxidation system in *Lupinus albus*, 114, 727
- Craig, Lyman C. See JACOBS and CRAIG, 104, 547
106, 393
108, 595
110, 521
111, 455
113, 759, 767
115, 227
119, 141
120, 447
122, 419
124, 659
- , Shedlovsky, Theodore, Gould, R. Gordon, Jr., and Jacobs, Walter A. The ergot alkaloids. XIV. The positions of the double bond and the carboxyl group in lysergic acid and its isomer. The structure of the alkaloids, 125, 289
- See JACOBS and CRAIG, 125, 625
- Creech, H. J. See FRANKS and CREECH, 123, xxxviii
- Creighton, M. M. See COGHILL and CREIGHTON, 123, xxiii
- See ANDERSON, LOTHROP, and CREIGHTON, 125, 299
- Crescitelli, Frederick, and Taylor, Ivon R. Changes in the concentration of reducing substances during the metamorphosis of *Galleria mellonella* (bee-moth), 108, 349

- Crimm, Paul D., and Strayer, J. W.** Phosphatase content of blood serum and tissues in the rat following administration of vitamins D and A, 112, 511
- Crowder, J. A., and Anderson, R. J.** A contribution to the chemistry of *Lactobacillus acidophilus*. II. Composition of the neutral fat, 104, 399
- and —. III. The composition of the phosphatide fraction, 104, 487
- See **NEWMAN, CROWDER, and ANDERSON**, 105, 279
- See **ANDERSON, CROWDER, NEWMAN, and STODOLA**, 113, 637
- , **Stodola, F. H., and Anderson, R. J.** The chemistry of the lipids of tubercle bacilli. XLV. Isolation of α - and β -leprosols, 114, 431
- See **ANDERSON, REEVES, and CROWDER**, 121, 669
- Crowe, M. O'L.** The ultraviolet absorption spectrum curve of phthiocol, a pigment of the human tubercle bacillus, 115, 479
- Crowell, Mary.** See **McCAY, TUNISON, CROWELL, and PAUL**, 114, 259
- Csonka, Frank A.** Proteins of yeast (*Saccharomyces cerevisiae*), 105, xix
- 109, 703
- Amino acid content of staple foods, 109, xxv
- 114, xxiii
- Amino acids in staple foods. I. Wheat (*Triticum vulgare*), 118, 147
- Culbert, Robert W.** The vapor pressure of human blood by Hill's thermoelectric method. Apparatus and technique, 109, 547
- , **McCune, D. J., and Weech, A. A.** Rate of evaporation in serum as a measure of vapor pressure, osmotic pressure, and concentration of solutes, 119, 589
- Cullen, Glenn E., and Wilkins, Walter E.** Electrolytes in human tissue. I. The digestion of tissue and other biological material and the subsequent determination of various electrolytes, 102, 403
- , —, and **Harrison, Tinsley R.** Electrolytes in human tissue. II. The electrolyte content of hearts and other tissues from cases with various diseases, 102, 415
- See **ROBINSON, PRICE, and CULLEN**, 106, 7
- 109, lxxiv
- 114, 321
- See **ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN**, 114, lxxxiv
- See **HOLMES and CULLEN**, 123, lx
- Cullimore, Owen S.** See **BLATHERWICK, BRADSHAW, CULLIMORE, EWING, LARSON, and SAWYER**, 113, 405
- Cupps, P. T.** See **BERGMAN and TURNER**, 123, 471

Curtis, George. See OLMSTED,
CURTIS, and TIMM,
108, 645

Curtis, George H. See WEST,
HOAGLAND, and CURTIS,
104, 627

— See WEST, LANE, and CUR-
TIS,
109, xcvi

Curtis, George M. See COLE
and CURTIS,
105, xvii
109, xxii

Curtis, Jack M., MacCorquodale,
D. W., Thayer, Sidney A., and
Doisy, Edward A. A study of
theelin prepared from human
and mare urine and from thee-
lol, with some remarks on the
preparation of theelin from
mare urine,
107, 191

—, Miller, Lloyd C., and Witt,
Ewald. Decreased sensitivity
to theelol of castrate female
rats,
119, xxi

Curtis, Lawrence C. See
PUCHER, CURTIS, and VICK-
ERY,
123, 61, 71

Cushman, Margaret. See FOLIN,
101, 111

Cutler, Charles H. See DEUEL,
GULICK, GRUNEWALD, and
CUTLER,
104, 519

— See GRUNEWALD, CUTLER,
and DEUEL,
105, 35

— See BUTTS, CUTLER, and
DEUEL,
105, 45

— See BUTTS, CUTLER, HALL-
MAN, and DEUEL,
109, 597

— See DEUEL, BUTTS, HALL-
MAN, and CUTLER,
112, 15

— See DEUEL, BUTTS, BLUN-
DEN, CUTLER, and KNOTT,
117, 119

Cutler, Hayden H. See POWER,
WILDER, and CUTLER,
123, xciv

Cutler, Jessie T. Studies on the
carbohydrate metabolism of
the goat. The blood sugar
and the inorganic phosphate,
106, 653

Czarnetzky, E. J., and Schmidt,
Carl L. A. Studies on the
combinations of certain amino
acids and proteins in the solid
state with certain gaseous acids
and bases,
105, 301

D

Da Costa, Esther. See HAST-
INGS, McLEAN, EICHEL-
BERGER, HALL, and DA COSTA,
107, 351

Daft, Floyd Shelton, Robscheit-
Robbins, Frieda S., and Whip-
ple, G. H. New formed hemo-
globin and protein catabolism.
Conservation of intermediates
in the anemic dog on a protein-
free diet,
103, 495

—, —, and —. New formed
hemoglobin and protein catab-
olism in the anemic dog,
108, 487

—, —, and —. Liver injury by
chloroform, nitrogen metab-
olism, and conservation.
Liver function and hemoglobin
production in anemia,
113, 391

—, —, and —. Abscess nitro-
gen metabolism in anemic and
non-anemic dog. Reserve
stores of protein apparently
involved,
121, 45

—, —, and —. Plasma protein

- given by vein and its influence upon body metabolism,
123, 87
- Dakin, H. D., and West, Randolph.** Observations on the chemical nature of a hematopoietic substance occurring in liver, 109, 489
- , **Ungley, C. C., and West, Randolph.** Further observations on the chemical nature of a hematopoietic substance occurring in liver, 115, 771
- Dalton, John B., and Schmidt, Carl L. A.** The solubilities of certain amino acids in water, the densities of their solutions at twenty-five degrees, and the calculated heats of solution and partial molal volumes, 103, 549
- and —. The solubilities of certain amino acids and related compounds in water, the densities of their solutions at twenty-five degrees, and the calculated heats of solution and partial molal volumes. II, 109, 241
- Daly, C., and Dill, D. B.** Carbamino compounds and carbon dioxide transport, 109, xxv
- See **DILL, DALY, and BOCK**, 114, xxv
- See **DILL, DALY, and FORBES**, 117, 569
- Dam, Henrik.** See **SCHOENHEIMER, SPERRY, and DAM**, 109, lxxix
- See **SCHOENHEIMER, DAM, and VON GOTTBURG**, 110, 659, 667
- Daniels, Farrington.** See **HOFFMAN and DANIELS**, 115, 119
- Danielson, Irvin S.** Amino acid nitrogen in blood and its determination, 101, 505
- On the presence of creatinine in blood, 113, 181
- See **MANERY, DANIELSON, and HASTINGS**, 124, 359
- Danielson, Wayne H.** See **MYERS, MUNTWYLER, BINNS, and DANIELSON**, 102, 19
- and **Stecher, Robert M.** The acid-base balance of the blood serum in hyperthermia, 114, xxiii
- Dann, Margaret.** See **BARKER, CHAMBERS, and DANN**, 118, 177
- Dann, W. J.** The vitamin G complex in rat dermatitis and human pellagra, 114, xxiv
- and **Evelyn, Kenneth A.** The quantitative estimation of vitamin A with the photoelectric colorimeter, 123, xxvi
- Daoud, Lateefeh.** See **KERR and DAUD**, 109, 301
- Darby, William J.** See **DAY and DARBY**, 119, xxii
- 123, xxviii
- Darnell, Matthew C., Jr.** See **LOONEY and DARNELL**, 114, lxii
- Darrow, Daniel C.** See **BLOCK, DARROW, and CARY**, 104, 347
- and **Cary, M. Katherine.** The effect of nutritional hypoproteinemia on the electrolyte

- pattern and calcium concentration of serum, 105, 327
- See YANNET, DARROW, and CARY, 112, 477
- See HARRISON, DARROW, and YANNET, 113, 515
- See HARRISON and DARROW, 121, 631
- See YANNET and DARROW, 123, 295
- and Harrison, Harold E. The chemical composition of tissues in adrenal insufficiency, 123, xxvii
- Davenport, Horace W. See BOR-SOOK, DAVENPORT, JEFFREYS, and WARNER, 117, 237
- Davidson, Jehiel, and LeClerc, J. A. A new method for the determination of the acid-base balance in food materials, 108, 337
- Davis, Burt Lincoln, Jr., and Van Winkle, Walton, Jr. The effect of insulin and epinephrine on the amino acid content of the blood of adrenalectomized rabbits, 104, 207
- Davis, George. See McCAY and MAYNARD, 109, 29
- Davis, W. W. See CLOWES, DAVIS, and KRAHL, 123, xxii
- Dawson, Martin H. See KENDALL, HEIDELBERGER, and DAWSON, 118, 61
- Day, Harry G., Kruse, H. D., and McCollum, E. V. Studies on magnesium deficiency in animals. VII. The effects of magnesium deprivation, with a superimposed calcium deficiency, on the animal body, as revealed by symptomatology and blood changes, 112, 337
- , Stein, Harold J., and McCollum, E. V. The effect upon hematopoiesis of variations in the levels of calcium, phosphorus, and iron in the diet, 123, xxviii
- Day, Paul L. Blood sugar in rats in which cataract was produced by a vitamin G-deficient diet and by a lactose-containing diet, 109, xxvi
- , Langston, William C., and Shukers, Carroll F. Leucopenia and anemia in the monkey resulting from dietary deficiency, 114, xxv
- and Darby, William J. The influence of different casein preparations in flavin-deficient diets upon the appearance of cataract, 119, xxii
- and —. The riboflavin requirement for growth of the rat, 123, xxviii
- Dearborn, R. B. See KERTESZ, DEARBORN, and MACK, 116, 717
- DeEds, Floyd, and Eddy, C. W. The microdetermination of silicon, 114, 667
- Deere, Charles J. See HARNED and DEERE, 104, 727
- DeMeio, R. H., Kissin, Milton, and Barron, E. S. Guzman. Studies on biological oxidations. IV. On the mechanism of the catalytic effect of reversible dyes on cellular respiration, 107, 579

- See BARRON, DeMEIO, and KLEMPERER, 112, 625
- Dennett, Linnea. See HALLIDAY, 106, 29
- Dennis, Joe. See HENDRIX and DENNIS, 123, liii
- Deren, M. See MATTICE, BRUGER, and DEREN, 109, lx
- Dersch, Fritz. See CONANT, DERSCH, and MYDANS, 107, 755
- Deuel, Harry J., Jr., MacKay, Eaton M., Jewel, Paul W., Gulick, Margaret, and Grunewald, Carl F. Studies on ketosis. III. The comparative glycogen formation and retention after the administration of glucose, galactose, and lactose, 101, 301
- , Gulick, Margaret, Grunewald, Carl F., and Cutler, Charles H. The sexual variation in carbohydrate metabolism. III. The comparative glycogen and fat content of the liver and muscles of rats and guinea pigs, 104, 519
- See GULICK, SAMUELS, and DEUEL, 105, 29
- See GRUNEWALD, CUTLER, and DEUEL, 105, 35
- See BUTTS, CUTLER, and DEUEL, 105, 45
- The relation of the anterior pituitary gland to ketonuria, 105, xix
- See BUTTS, CUTLER, HALLMAN, and DEUEL, 109, 597
- , Butts, Joseph S., Hallman, Lois F., and Cutler, Charles H. Studies on ketosis. VII. Quantitative studies on β oxidation. Glycogen formation from various fatty acids, 112, 15
- , Hallman, Lois F., Butts, Joseph S., and Murray, Sheila. Studies on ketosis. VIII. Quantitative studies on the oxidation of the ethyl esters of the fatty acids, 116, 621
- , Butts, Joseph S., Blunden, Harry, Cutler, Charles H., and Knott, Leslie. Studies on ketosis. IX. Glycogen formation from various purified and natural fats, 117, 119
- See BUTTS, BLUNDEN, GOODWIN, and DEUEL, 117, 131
- , Hallman, Lois F., and Murray, Sheila. Studies on ketosis. XI. The relation of fatty livers to fasting ketonuria in the rat, 119, 257
- , —, and —. The relation of ketonuria to liver fat, 119, xxii
- , —, —, and Samuels, Leo T. The sexual variation in carbohydrate metabolism. VIII. The rate of absorption of glucose and of glycogen formation in normal and adrenalectomized rats, 119, 607
- , Butts, Joseph S., Hallman, Lois F., Murray, Sheila, and Blunden, Harry. The sexual variation in carbohydrate metabolism. IX. The effect of age on the sex difference in the content of liver glycogen, 119, 617
- , Murray, Sheila, Hallman, Lois F., and Tyler, David B.

- Studies on ketosis. XII. The effect of choline on the ketonuria of fasting rats following a high fat diet, 120, 277
- , Butts, Joseph S., Hallman, Lois F., Murray, Sheila, and Blunden, Harry. Studies on ketosis. XIII. Diurnal changes in liver glycogen, 123, 257
- , Hallman, Lois F., and Murray, Sheila. Ketolysis *versus* antiketogenesis as an explanation for the action of carbohydrate on ketonuria, 123, xxix
- , —, and —. Studies on ketosis. XIV. Ketolysis *versus* antiketogenesis as an explanation for the action of carbohydrate on ketonuria, 124, 385
- , —, —, and Hilliard, J. Studies on ketosis. XV. The comparative metabolism of *d*-mannose and *d*-glucose, 125, 79
- DeWitt, James. See SURE, KIK, and BUCHANAN, 108, 27
- , See SURE and DEWITT, 123, cxx
- Dill, D. B., and Edwards, H. T. Effects of adrenalin in exercise, 105, xx
- , See CHRISTENSEN and DILL, 109, 443
- , See DALY and DILL, 109, xxv
- , Forbes, W. H., and Henderson, L. J. Errors in calculated pH in hemoglobin solutions with little available base, 109, xxvii
- , Daly, C., and Bock, A. V. Sweat, 114, xxv
- , See HASTINGS, DILL, and EDWARDS, 114, xlvii
- , Daly, C., and Forbes, W. H. The pK' of serum and red cells, 117, 569
- , Edwards, H. T., and Consolazio, W. V. Blood as a physicochemical system. XI. Man at rest, 118, 635
- , Talbott, John H., and Consolazio, W. V. Blood as a physicochemical system. XII. Man at high altitudes, 118, 649
- , —, and —. The physicochemical properties of human blood at high altitudes, 119, xxiii
- , Edwards, H. T., and Robinson, S. Metabolic adjustments, exercise, and age, 123, xxx
- Diller, Isaac M. Photoelectric colorimeter, 115, 315
- , Note on turbidity in uric acid determinations, with special reference to the photoelectric colorimeter, 118, 161
- Dillman, Lucius M., and Vischer, Maurice B. The calcium content of ultrafiltrates of plasma and the influence of changes in hydrogen and bicarbonate ion concentrations upon it, 103, 791
- Dillon, Robert T. See VAN SLYKE, DILLON, and MARGARIA, 105, 571
- , See SENDROY, DILLON, and VAN SLYKE, 105, 597

- Dingwall, Andrew.** See RABINOWITCH, DINGWALL, and MAC-KAY, 103, 707, 725
- Ditt, F.** See KLENK and DITT, 111, 749
- Dobriner, Konrad.** Urinary porphyrins in disease, 113, 1
- , Localio, Sylvio, and Strain, William H. A study of the porphyrins excreted in congenital porphyrinuria, 114, xxvi
- , Porphyrin excretion in the feces in normal and pathological conditions, 120, 115
- Dodge, Warren M.** See MITCHELL and DODGE, 105, lxi
- Doebbeling, S. E.** See SHERMAN, CALDWELL, and DOEBBELING, 104, 501
- , See CALDWELL and DOEBBELING, 110, 739
114, xvii
123, 479
- Doherty, David G.** See BERGMANN and FRAENKEL-CONRAT, 124, 1
- , See BERGMANN and BEHR-ENS, 124, 7
- Doisy, Edward A.** See MACCORQUODALE, LEVIN, THAYER, and DOISY, 101, 753
- , See KATZMAN and DOISY, 105, xlv
106, 125
- , See CURTIS, MACCORQUODALE, THAYER, and DOISY, 107, 191
- , See KATZMAN and DOISY, 107, 513
- , See MACCORQUODALE, THAYER, and DOISY, 109, lviii
- , See KATZMAN, WADE, and DOISY, 114, lvi
- , See MACCORQUODALE, THAYER, and DOISY, 115, 435
- , See THAYER, MACCORQUODALE, MCKEE, and DOISY, 123, cxx
- , See WESTERFELD, MACCORQUODALE, THAYER, and DOISY, 123, cxxvi
- Dolin, B. T.** See FISHBERG and DOLIN, 101, 159
- Domanski, Thaddeus John.** Isolation of vinyl ether (divinyl oxide) from human tissues, 119, 69
- Dominguez, R., and Pomerene, Elizabeth.** Studies of the renal excretion of creatinine. I. On the functional relation between the rate of output and the concentration in the plasma, 104, 449
- Donal, John S., Jr.** A method for the estimation of the oxygen content of one cubic millimeter of blood, 105, xxi
- , An ultramicromethod for the determination of the oxygen content of blood, 106, 783
- Dorfman, Ralph I.** See LORING, DORFMAN, and DU VIGNEAUD, 103, 399
- , The comparative activity of various estrogens on the infantile rat uterus and vagina, 119, xxiv
- , The excretion and metabolism of theelin in the sexually immature rat, 119, xxv
- and Greulich, William Walter.

- The response of the chick comb to sex hormones, 119, xxv
- The excretion of androgenic substances after the administration of testosterone, 123, xxx
- Doster-Virtue, Mildred E.** See **VIRTUE** and **DOSTER-VIRTUE**, 119, ci, 697
123, cxxiii
- Dotti, Louis B.** Studies in the carbohydrate metabolism of the rabbit. I. The true blood sugar value in convulsions due to insulin administration, 104, 535
- Insulin hyperglycemia as a measure of the sensitivity of the individual to insulin, 105, xxii
- See **HRUBETZ** and **DOTTI**, 107, 731
- and **Hrubetz, M. Caroline.** The true blood sugar level in insulin shock and convulsions, 113, 141
- Doty, J. R., and Eaton, A. G.** Metabolism of the basic amino acids. I. Rates of absorption in rats of the monohydrochlorides of *d*-lysine and *l*-histidine, 122, 139
- Doubilet, Henry.** Differential quantitative analysis of bile acids in bile and in duodenal drainage, 114, 289
- Dounce, Alexander L.** See **SUMNER** and **DOUNCE**, 117, 713
119, xcvi
121, 417
- and **Sumner, James B.** A second crystallizable liver protein, 124, 415
- Downes, Helen R., and Richards, Leah.** A note on the concentration of the antidiuretic factor of the anterior lobe of the pituitary, 110, 81
- Downing, Virginia.** See **SHAW** and **DOWNING**, 109, 405
- Downs, C. E.** See **HARDING** and **DOWNES**, 101, 487
- Dox, A. W., Bywater, W. G., and Tendick, F. H.** A crystalline by-product obtained in the large scale extraction of theelin and theelol, 112, 425
- Drabkin, David L.** See **FITZHUGH**, **ROBSON**, and **DRABKIN**, 103, 617
- and **Austin, J. Harold.** A spectrophotometric study of methemoglobin, 105, xxiii
- , **Wideman, A. H., and Landow, H.** The fate of hemoglobin injected into the blood stream, 109, xxvii
- and **Austin, J. Harold.** Spectrophotometric studies. II. Preparations from washed blood cells; nitric oxide hemoglobin and sulfhemoglobin, 112, 51
- See **AUSTIN** and **DRABKIN**, 112, 67
- and **Austin, J. Harold.** Spectrophotometric studies. IV. Hemochromogens, 112, 89
- and —. V. A technique for the analysis of undiluted blood and concentrated hemoglobin solutions, 112, 105

Drabkin, David L.—*continued*

— An analysis of the absorption spectra of hemoglobin, 114, xxvii

— A new graphic-mathematical analysis of absorption spectra, as applied to hemoglobin derivatives, 119, xxvi

— A study of hemochromogen equilibria and a new nomenclature for hemoglobin derivatives, 123, xxxi

— See SMOLO, KERN, and DRABKIN, 125, 461

Drain, Charles L. See BOYD, DRAIN, and STEARNS, 103, 327

Drekter, I. J., Bernhard, Adolph, and Leopold, Jerome S. The extraction of cholesterol from blood serum, 110, 541

—, **Sobel, Albert E., and Natelson, Samuel.** Comparative estimations of free cholesterol in blood by the pyridine cholesteryl sulfate and the cholesterol digitonide methods, 114, xxviii

— See SOBEL, DREKTER, and NATELSON, 114, xcvi

—, **Sobel, Albert E., and Natelson, Samuel.** Fractionation of cholesterol in blood by precipitation as pyridine cholesteryl sulfate and cholesterol digitonide, 115, 391

Dubach, Reuben, and Hill, Robert M. An improved apparatus for the determination of colloid osmotic pressure in small amounts of fluid, 112, 313

DuBois, Delafield. See HIMWICH, GILDEA, RAKIETEN, and DuBOIS, 113, 383

— See STERN and DuBOIS, 116, 575

Dubos, René J. See MEYER, DUBOS, and SMYTH, 118, 71

— and **Miller, Benjamin F.** The production of bacterial enzymes capable of decomposing creatinine, 121, 429

— See MILLER and DUBOS, 121, 447, 457

— and **Thompson, Robert H. S.** The decomposition of yeast nucleic acid by a heat-resistant enzyme, 124, 501

— See THOMPSON and DUBOS, 125, 65

— See LAVIN, THOMPSON, and DUBOS, 125, 75

Duff, F. L., Sheppard, Fay, and Everett, Mark R. Further studies of bromine oxidation of carbohydrates, 123, xxxii

Duff, Virginia B. See BODANSKY, 112, 615

— See BODANSKY and DUFF, 114, xiii

— See BODANSKY, 115, 641

— See BODANSKY, DUFF, and HERRMANN, 119, xiii

Dufrenoy, Jean. See REED and DUFRENOY, 105, lxx

Duncan, C. W., Huffman, C. F., and Robinson, C. S. Magnesium studies in calves. I. Tetany produced by a ration of milk or milk with various supplements, 108, 35

Duncan, D. R. L., Gallagher, T.

- F., and Koch, F. C. The nature of the estrus-inhibiting substances in testis tissue concentrates, 119, xxvii
- Duncan, Marion T. See RUSSELL, TAYLOR, and DUNCAN, 119, lxxxv
- Dunn, Edwin E., and Morgulis, Sergius. Studies on the catalase and peroxidase activity of the liver cell, 118, 545
- Dunn, Max S., and Fox, Sidney W. The synthesis of aspartic acid, 101, 493
- , Ross, Frank J., and Read, Lee S. The solubility of the amino acids in water, 103, 579
- , Redemann, C. E., and Smith, Nathaniel L. The synthesis of serine, 104, 511
- , Smart, B. W., Redemann, C. E., and Smith, Nathaniel L. The vapor pressure-temperature reactions of the ethyl esters of the amino acids, 105, xxiii
- See BUTTS and DUNN, 109, xiii
- See BUTTS, DUNN, and HALLMAN, 112, 263
- See FERAUD, DUNN, and KAPLAN, 112, 323
- and Loshakoff, Abe. Quantitative investigations of amino acids and peptides. I. Quantitative formol titration by means of the glass electrode, 113, 359
- and —. II. Apparent acid dissociation constants in aqueous formaldehyde solution, 113, 691
- See FERAUD, DUNN, and KAPLAN, 114, 665
- and Weiner, Joseph G. Quantitative investigations of amino acids and peptides. III. Apparent acid dissociation constants in aqueous formaldehyde solution, 117, 381
- See BUTTS, BLUNDEN, and DUNN, 119, 247
- See BUTTS, DUNN, and BLUNDEN, 119, xv
- , Ross, Frank J., and Stoddard, M. Palmer. The solubility of certain amino acids in water-ethyl alcohol mixtures, 119, xxviii
- See BUTTS, BLUNDEN, and DUNN, 120, 289
- and Stoddard, M. Palmer. Crystalline anhydrous and monohydrated *dl*-glutamic acid, 121, 521
- See BUTTS, DUNN, and HALLMAN, 123, 711
- See BUTTS, BLUNDEN, and DUNN, 124, 709
- and Ross, Frank J. Quantitative investigations of amino acids and peptides. IV. The solubilities of the amino acids in water-ethyl alcohol mixtures, 125, 309
- Dutcher, R. Adams. See GUERRANT, DUTCHER, and TOMMY, 110, 233
- See GUERRANT, CHORNOCK, and DUTCHER, 119, xlii
- Dyer, Helen M. See DU VIGNEAUD, DYER, and HARMON, 101, 719

Dyer, Helen M.—*continued*

- See DU VIGNEAUD, DYER,
JONES, and PATTERSON,
106, 401
- and du Vigneaud, Vincent.
A study of the physiological
availability of pentocystine
and of homomethionine,
108, 73
- and —. A study of the
availability of *d*- and *l*-homo-
cystine for growth purposes,
109, 477
- and —. The utilization of
glutathione in connection with
a cystine-deficient diet,
115, 543
- See PATTERSON, DYER, and
DU VIGNEAUD, 116, 277
- See DU VIGNEAUD, DYER,
and JONES, 119, 47
- The metabolic behavior of
djenkolic and homodjenkolic
acids, 119, xxviii
- See DU VIGNEAUD, IRVING,
DYER, and SEALOCK,
123, 45
- Evidence of the physio-
logical specificity of methionine
in regard to the methylthiol
group: the synthesis of S-ethyl-
homocysteine (ethionine) and
a study of its availability for
growth, 124, 519

E

Eagle, Harry, and Vickers, Percy.

On the nature of the reaction
between diazotized sulfanilic
acid and proteins, 114, 193

**Eastman, Irene M., and Miller,
Edgar G., Jr.** Gastroin-

testinal pH in rats as deter-
mined by the glass electrode,
110, 255

Eaton, A. G. See DOTY and
EATON, 122, 139

**Eck, John C., and Marvel, Carl
S.** A convenient synthesis of
dl-lysine, 106, 387

—, Thomas, Byron H., and
Yoder, Lester. The chemical
activation of sterols. II. The
chemical activation of cho-
lesterol and various cholesterol
derivatives, 117, 655

— and —. The chemical activa-
tion of sterols. III. The
chemical activation of cho-
lesterol, 119, 621

— and —. IV. The chemical
activation of cholesterol and
cholesterilene by various rea-
gents, 119, 631

**Ecker, E. E., Pillemer, L.,
Martensen, E. W., and
Wertheimer, D.** Comple-
ment activity as influenced by
certain chemical agents,
123, 351

—, —, —, and —. Complement
function as influenced by
Szent-Györgyi's hexoxidase,
123, 359

— See PILLEMER, ECKER,
MYERS, and MUNTWYLER,
123, 365

Eckstein, H. C. Glycogen
formation in the white rat
after oral administration of
propionic, butyric, valeric, and
caproic acids, 102, 591

— The linoleic and linolenic
acid contents of butter fat,
103, 135

- and Treadwell, Carleton R. The effect of ingested fat on the sterol metabolism of the white rat, 112, 373
- See TUCKER and ECKSTEIN, 121, 479
- Sterol metabolism in young white rats. II. The effect of saponifiable lipids and degree of unsaturation of lipids on the sterol metabolism of the white rat, 125, 99
- III. The effect of high and low fat diets on the sterol balances and sterol content of the hair of young white rats, 125, 107
- Eddy, C. W. See DEEDS and EDDY, 114, 667
- Edsall, John T. See COHN, ED-SALL, and BLANCHARD, 105, 319
- and Wyman, Jeffries, Jr. The polarity of certain betaines, 105, xxiv
- Raman spectra of *l*-ascorbic acid and its sodium salt, 114, xxviii
- Raman spectra of choline, betaine, sarcosine, glycylglycine, and related compounds, 123, xxxiii
- Edwards, Beatrice G. See EVERETT, EDWARDS, and SHEPPARD, 104, 11
- Studies of phenol estimation. I. Preliminary survey, 109, xxviii
- Phenolic substances of urine, 114, xxix
- The bromometric determination of phenols and related substances, 119, xxix
- Edwards, H. T. See DILL and EDWARDS, 105, xx
- Blood lactic acid in rest and work at high altitudes, 114, xxx
- See HASTINGS, DILL, and EDWARDS, 114, xlvii
- See JOHNSON and EDWARDS, 118, 427
- See DILL, EDWARDS, and CONSOLAZIO, 118, 635
- See JOHNSON and EDWARDS, 119, liv
- See DILL, EDWARDS, and ROBINSON, 123, xxx
- A simplified estimation of lactate in normal human blood, 125, 571
- Edwards, J. Graham, and Langley, Wilson D. The micro-determination of ferrocyanide in muscle and urine, 112, 469
- Ehrenfest, Ellen. See RONZONI and EHRENFEST, 115, 749
- Ehrenstein, Maximilian, and Corey, Edward L. Activation of testosterone by higher fatty acids and their acid sodium salts, 122, 297
- Eichelberger, Lillian. See HASTINGS, MCLEAN, EICHELBERGER, HALL, and DA COSTA, 107, 351
- See HASTINGS and EICHELBERGER, 109, xli
- and Hastings, A. Baird. The exchange of salt and water between muscle and blood. II. The effect of respiratory alkalosis and acidosis induced

- Eichelberger, Lillian**—*continued*
 by overbreathing and re-breathing, 118, 197
 — and —. III. The effect of dehydration, 118, 205
 —. The exchange of salt and water between muscle and blood in experimental chronic hydronephrosis, 119, xxx
 —. The exchange of salt and water between muscle and blood. IV. Correction of values for volume phases of skeletal muscle. Methods for determination of blood volume in muscle, 122, 323
- Eiler, John J., and Allen, Frank Worthington.** The catabolism of the purine nucleotides. I. The relation to glycolysis in the blood of the rabbit, 123, 655
- Eisenman, Anna J.** The measurement of blood cell volume, 114, xxx
 —, **Mackenzie, Laura B., and Peters, John P.** Protein and water of serum and cells of human blood, with a note on the measurement of red blood cell volume, 116, 33
 —. See **HALD** and **EISENMAN**, 118, 275
 —, **Hald, Pauline M., and Peters, John P.** Osmotic adjustments between cells and serum in the circulating blood of man, 118, 289
- Elden, C. A.** A method of separating the anterior pituitary-like hormone from the urine of pregnant women, 101, 1
- Elderfield, Robert C.** See **JACOBS** and **ELDERFIELD**, 102, 237
 — and **Rothen, Alexandre.** Strophanthin. XXX. The ultraviolet absorption spectra of trianhydrostrophanthidin and trianhydroperiplogenin derivatives, 106, 71
 — and **Jacobs, Walter A.** Strophanthin. XXXI. Further studies on the dehydrogenation of strophanthidin, 107, 143
 —. See **JACOBS** and **ELDERFIELD**, 108, 497, 693
 —. The structure and configuration of cymarose, 111, 527
 —. See **JACOBS** and **ELDERFIELD**, 113, 611, 625
 —. Strophanthin. XXXV. The nature of "the acid, $C_{23}H_{30}O_8$," from strophanthidin, 113, 631
 —. See **JACOBS** and **ELDERFIELD**, 114, 597
 —. On thevetin, 115, 247
- Eley, R. C.** See **GREEN**, **LOWRY**, **ELEY**, and **McKHANN**, 114, xlii
- Ellinwood, E. H.** See **WALKER** and **REISINGER**, 101, 223
 —. See **WALKER**, 101, 239, 269
- Elliot, A. H.** See **BISCHOFF** and **ELLIOT**, 109, 419
 117, 7
- Elliott, Margaret.** See **TOENIES** and **ELLIOTT**, 105, xciii
 111, 61

- Ellis, Emory L. See BORSOOK,
ELLIS, and HUFFMAN,
117, 281
- Ellis, Gordon, and Maynard, L.
A. The determination of
phospholipids in bovine blood,
118, 701
- See MAYNARD, HODSON,
ELLIS, and McCAY,
119, lxvi
- Ellis, L. N. See SHERMAN and
ELLIS,
104, 91
- Ellis, N. R. See SPADOLA and
ELLIS,
113, 205
- See RIEMENSCHNEIDER and
ELLIS,
113, 219
114, 441
- Elvehjem, C. A. See SCHULTZE
and ELVEHJEM,
102, 357
- , Hart, E. B., and Sherman,
W. C. The availability of
iron from different sources for
hemoglobin formation,
103, 61
- See KEENAN, KLINE, ELVE-
HJEM, HART, and HALPIN,
103, 671
- and Kline, B. E. Calcium and
phosphorus studies in the
chick,
103, 733
- See SCHULTZE and ELVE-
HJEM,
105, 253
- , Cohen, Eugene, and Stare,
F. J. The relation of copper
to tissue respiration,
105, xxv
- See PHILLIPS, STARE, and
ELVEHJEM,
106, 41
- See SCHULTZE, ELVEHJEM,
and HART,
106, 735
- See COHEN and ELVEHJEM,
107, 97
- See KLINE, ELVEHJEM,
KEENAN, and HART,
107, 107
- See SHERMAN, ELVEHJEM,
and HART,
107, 289, 383
- and Koehn, C. J., Jr. Studies
on vitamin B₂ (G). The non-
identity of vitamin B₂ and
flavins,
108, 709
- See STIRN, ELVEHJEM, and
HART,
109, 347
- , Sherman, W. C., and Arnold,
Aaron. The vitamin B (B₁)
content of animal tissues,
109, xxix
- See CLIFCORN, MELOCHE,
and ELVEHJEM,
111, 399
- See KOHLER, ELVEHJEM,
and HART,
113, 49
- See BIRD, ELVEHJEM, and
HART,
114, x
- , Koehn, C. J., Jr., and Oleson,
J. J. An essential dietary
factor found in yeast and liver
extract distinct from vitamins
B₁, B₂, B₄, and flavins, 114, xxxi
- See POTTER and ELVEHJEM,
114, 495
- See SCHULTZE, ELVEHJEM,
and HART,
115, 453
- , Koehn, C. J., Jr., and Oleson,
J. J. A new essential dietary
factor,
115, 707
- See SCHULTZE, ELVEHJEM,
and HART,
116, 93, 107
- See ARNOLD, KLINE, ELVE-
HJEM, and HART,
116, 699
- See SCHULTZE and ELVE-
HJEM,
116, 711
- See POTTER and ELVEHJEM,
117, 341
- See KOEHN and ELVEHJEM,
118, 693

Elvehjem, C. A.—continued

- See FROST and ELVEHJEM, 119, xxxiv
- See BORGES and ELVEHJEM, 119, 725
- See PEARSON, ELVEHJEM, and HART, 119, 749
- See FROST and ELVEHJEM, 121, 255
- See SCHANTZ, ELVEHJEM, and HART, 122, 381
- , Madden, Robert J., Strong, F. M., and Woolley, D. W. The isolation and identification of the anti-black tongue factor, 123, 137
- See LIPSCHITZ, POTTER, and ELVEHJEM, 123, 267
- , 124, 147
- See MICKELSEN, WAISMAN, and ELVEHJEM, 124, 313
- See UNDERWOOD and ELVEHJEM, 124, 419
- See WOOLLEY, STRONG, MADDEN, and ELVEHJEM, 124, 715
- See WOOLLEY, WAISMAN, MICKELSEN, and ELVEHJEM, 125, 715
- Ely, J. Owen. See WEIL and ELY, 112, 565
- Emerson, Charles P., Jr. See HELMER and EMERSON, 104, 157
- Emerson, Gladys A. See EVANS, EMERSON, and EMERSON, 113, 319
- See EMERSON, EMERSON, MOHAMMAD, and EVANS, 122, 99
- , Mohammad, Ali, Emerson, Oliver H., and Evans, Herbert

- M. Steps in the concentration of vitamin B₆, 124, 377
- Emerson, Oliver H. See EVANS, EMERSON, and EMERSON, 113, 319
- , Emerson, Gladys A., Mohammad, Ali, and Evans, Herbert M. The chemistry of vitamin E. Tocopherols from various sources, 122, 99
- See EMERSON, MOHAMMAD, EMERSON, and EVANS, 124, 377
- Emmett, A. D., and Bird, O. D. Comparative biological value of vitamin A as an alcohol and ester, 119, xxxi
- Engel, George L., and Chao, Iping. Comparative distribution of organic phosphates in the skeletal and cardiac muscles of *Limulus polyphemus*, 108, 389
- and Gerard, R. W. The phosphorus metabolism of invertebrate nerve, 112, 379
- Engel, L. L. See HERBST and ENGEL, 107, 505
- English, James, Jr., and Bonner, James. The wound hormones of plants. I. Traumatins, the active principle of the bean test, 121, 791
- Enklewitz, Morris. See LASKER and ENKLEWITZ, 101, 289
- and Lasker, Margaret. The origin of *l*-xyloketose (urine pentose), 110, 443
- The action of hydrogen peroxide on *l*-xyloketose (urine pentose), 116, 47

- Entenman, C. See LORENZ, ENTENMAN, and CHAIKOFF, 122, 619
- , See LORENZ, CHAIKOFF, and ENTENMAN, 123, 577
- , Ruben, S., Perlman, I., Lorenz, F. W., and Chaikoff, I. L. Radioactive phosphorus as an indicator of phospholipid metabolism. III. The conversion of phosphate to lipid phosphorus by the tissues of the laying and non-laying bird, 124, 795
- Eppright, Ercel S., and Smith, Arthur H. Influence of the inorganic salts in the diet on the composition of the ash of certain tissues of the rat, 118, 679
- Eppstein, S. H. See MORGULIS, WILDER, SPENCER, and EPPSTEIN, 124, 755
- Erickson, Betty Nims, Stoner, Neva, and Macy, Icie G. Human milk studies. XIV. A critique of the determinations of nitrogenous constituents, 103, 235
- , Gulick, Margaret, Hunscher, Helen A., and Macy, Icie G. Human milk studies. XV. The non-protein nitrogen constituents, 106, 145
- , Cope, Frances, Sternberger, Helen R., Lee, Pearl, Cooley, Thomas B., and Macy, Icie G. Lipid and mineral distribution between the red blood cells and plasma in normal children and in anemias of childhood, 109, xxx
- , Jones, Robert L., Bernstein, Samuel S., Williams, Harold H., Lee, Pearl, and Macy, Icie G. Biochemical studies of erythrocytes. I. Preparation of a posthemolytic residue, 114, xxxii
- , Williams, Harold H., Bernstein, Samuel S., and Jones, Robert L. Biochemical studies of erythrocytes. II. Lipid partition of posthemolytic residue, 114, xxxii
- , —, Hummel, Frances Cope, and Macy, Icie G. The lipid and mineral distribution in the serum and erythrocytes of normal children, 118, 15
- , —, —, Lee, Pearl, and Macy, Icie G. The lipid and mineral distribution of the serum and erythrocytes in the hemolytic and hypochromic anemias of childhood, 118, 569
- , See WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY, 118, 599
- , See BERNSTEIN, JONES, ERICKSON, WILLIAMS, AVRIN, and MACY, 122, 507
- , Williams, Harold H., Bernstein, Samuel S., Avrin, Ira, Jones, Robert L., and Macy, Icie G. The lipid distribution of posthemolytic residue or stroma of erythrocytes, 122, 515
- , See WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY, 123, 111
- , See BEACH, ERICKSON, BERNSTEIN, and WILLIAMS, 123, vii

Erickson, Betty Nims—*continued*

—, **Lee, Pearl**, and **Williams, Harold H.** The lipid distribution of human blood platelets in health and disease,

123, xxxiv

Eriksson-Quensel, Inga-Britta.

See **SUMNER, GRALÉN**, and **ERIKSSON-QUENSEL**,

125, 37, 45

Erlanger, Ruth J. See **MOORE**,

ERLANGER, and **WEST**,

113, 43

Evans, E. A., Jr. See **JENSEN**

and **EVANS**,

104, 307

108, 1

— See **JENSEN**, **EVANS**, **PEN-**

NINGTON, and **SCHOCK**,

109, xlv

114, 199

— Isomers of cholesterol,

114, xxxiii

— See **SCHOENHEIMER** and

EVANS,

114, 567

— and **Schoenheimer, Rudolf.**

β -Cholesterol,

115, 17

— Further evidence for the

absence of allocholesterol from

the organism,

115, 449

— and **Rittenberg, D.** Alcohol

formation in yeast grown in

heavy water,

119, xxxi

— See **RITTENBERG**, **SCHOEN-**

HEIMER, and **EVANS**,

120, 503

Evans, G. T. The effect of low

oxygen pressures upon the

liver and muscle glycogen of

the white rat,

105, xxvi

Evans, Herbert M., and **Lep-**

kovsky, Samuel. The spar-

ing action of fat on vitamin B,

105, xxvii

—, —, and **Murphy, Elizabeth A.**

Vital need of the body for

certain unsaturated fatty acids.

IV. Reproduction and lacta-

tion upon fat-free diets,

106, 431

—, —, and —. V. Reproduc-

tion and lactation upon diets

containing saturated fatty

acids as their sole source of

energy,

106, 441

—, —, and —. VI. Male ster-

ility on fat-free diets,

106, 445

—, —, and —. The sparing

action of fat on vitamin B.

VI. The influence of the levels

of protein and vitamin G,

107, 429

—, —, and —. VII. The effec-

tiveness of various natural

fats in sparing vitamin B,

107, 439

—, —, and —. The sparing

action of fat on vitamin G,

107, 443

— See **LEPKOVSKY**, **POPPER**,

and **EVANS**,

108, 257

— See **LEPKOVSKY**, **OUER**, and

EVANS,

108, 431

— and **Lepkovsky, Samuel.** The

sparing action of fat on vitamin

B. VIII. On the loss of vita-

min B from the rat's tissues,

108, 439

—, **Murphy, Elizabeth A.**, **Arch-**

bald, R. C., and **Cornish, R. E.**

Preparation and properties of

vitamin E concentrates,

108, 515

— See **LEPKOVSKY**, **POPPER**,

and **EVANS**,

109, liv

- , Emerson, Oliver H., and Emerson, Gladys A. The isolation from wheat germ oil of an alcohol, α -tocopherol, having the properties of vitamin E, 113, 319
- . See HALLIDAY and EVANS, 118, 255
- . See EMERSON, EMERSON, MOHAMMAD, and EVANS, 122, 99
- . See EMERSON, MOHAMMAD, EMERSON, and EVANS, 124, 377
- Evans, Margaret. See LANGLEY and EVANS, 115, 333
- Eveleth, Donald F. The blood chemistry of swine. I. Blood changes following the ingestion of glucose, 104, 559
- and Eveleth, Margaret W. Blood chemistry of swine. II. Further studies of blood changes following the ingestion of glucose, 111, 753
- and Myers, Victor C. Studies on aluminum. I. A critical study of quantitative colorimetric methods for aluminum on biological material, 113, 449
- and — . II. The storage of intravenously injected aluminum in the dog, 113, 467
- . Comparison of the distribution of magnesium in blood cells and plasma of animals, 119, 289
- Eveleth, Margaret W., Bing, Franklin C., and Myers, Victor C. Studies in the nutritional anemia of the rat. VII. Influence of parenterally administered iron, 101, 359
- . See EVELETH and EVELETH, 111, 753
- Evelyn, Kenneth A. A stabilized photoelectric colorimeter with light filters, 115, 63
- and Cipriani, A. J. A photoelectric microcolorimeter, 117, 365
- . See MALLOY and EVELYN, 119, 481
- . See VENNING, EVELYN, HARKNESS, and BROWNE, 120, 225
- and Gibson, John G., 2nd. A new type of absorption cell for the photoelectric microcolorimeter, 122, 391
- . See MALLOY and EVELYN, 122, 597
- . See DANN and EVELYN, 123, xxvi
- and Malloy, Helga Tait. The determination of methemoglobin and sulfhemoglobin with the photoelectric colorimeter, 123, xxxiv
- Everett, Mark R., Sheppard, Fay, and Johnson, Erma O. The precipitation of nitrogenous substances by alkaline mercuric reagents, with special reference to urine, 104, 1
- , Edwards, Beatrice G., and Sheppard, Fay. The nature of the sugar of normal urine. II. The behavior of carbohydrates in bromine water and the ketose of normal urine, 104, 11

Everett, Mark R.—*continued*

- See SHEPPARD and EVERETT,
105, lxxx
109, lxxxii
114, xci
- and Sheppard, Fay. A new
classification of carbohydrates,
119, xxxii
- See SHEPPARD and EVERETT,
119, lxxxix
- See DUFF, SHEPPARD, and
EVERETT, 123, xxxii
- See HART, SHEPPARD, and
EVERETT, 123, lii
- Everitt, E. L. See SULLIVAN,
MILONE, and EVERITT,
125, 471
- Evers, Ray. See MASON and
EVERS, 119, 735
- Eversole, W. G., Ford, Leonard
A., and Thomas, G. Wilson.
The nature and amount of
non-diffusible calcium in pro-
tein sols, 104, 107
- The nature and amount of
non-diffusible calcium in pro-
tein sols. A reply,
105, 515
- Ewing, Mary E. See BLATHER-
WICK, BRADSHAW, EWING,
LARSON, and SAWYER,
111, 537
- See BLATHERWICK, BRAD-
SHAW, CULLIMORE, EWING,
LARSON, and SAWYER,
113, 405
- See LARSON, BLATHERWICK,
BRADSHAW, EWING, and SAW-
YER, 117, 719
123, lxxiii
- Exton, William G. See ROSE,
EXTON, and BLACKER,
105, lxxiii

- See ROSE and EXTON,
109, lxxvi
- See ROSE, SCHATTNER, and
EXTON, 119, lxxxiv
- and Rose, Anton R. Chlo-
rides in biological fluids,
123, xxxv

F

- Fabian, A. Appelsis. See
LEVINE, SACHS, and FABIAN,
119, lxiii
- Failey, Crawford F., and Brand,
Erwin. The electrometric
titration of creatine ester hy-
drochloride and some related
compounds, 102, 767
- See STONE and FAILEY,
105, lxxxvi
- Fairman, E. See HAHN and
FAIRMAN, 113, 161
- Falk, K. George. Directive in-
fluences in biological systems.
III. The effect of proteases on
lipase actions, 103, 363
- See MCGUIRE and FALK,
105, 373
- and McGuire, Grace. Stud-
ies on enzyme action.
XLVIII. Lipase actions of
horse serum, 105, 379
- See MCGUIRE and FALK,
105, 669
- and McGuire, Grace. Stud-
ies on enzyme action. XLIX.
The lipase actions of tissues
of rachitic rats, 108, 61
- Farquhar, Lucille Reed. See
BLOCK and FARQUHAR,
103, 643
- Farr, Lee E. See PAGE, FARR,
and WEECH, 121, 111

- Farrar, George E., Jr. The determination of iron in biological materials, 109, xxxi
110, 685
- Fashena, Gladys J. See TREVORROW and FASHENA, 110, 29
- and Trevorrow, Virginia. A note on the determination of iodine in biological material, 114, 351
- Fay, Marion, and Wharton, P. S. Galactose in the thoracic lymph of the dog, 109, 695
- Fazekas, J. F. See BAKER, FAZEKAS, and HIMWICH, 125, 545
- Feldkamp, Rolland F. See SAH-YUN and FELDKAMP, 116, 555
- Fell, Norbert H. Chemical and immunological properties of silk proteins, 109, xxxi
- Fenn, W. O., and Goettsch, Marianne. Electrolytes in nutritional muscular dystrophy in rabbits, 120, 41
- Feraud, Katherine, Dunn, Max S., and Kaplan, Joseph. Spectroscopic investigations of amino acids and amino acid derivatives. I. Ultraviolet absorption spectra of *l*-tyrosine, *dl*-phenylalanine, and *l*-tryptophane, 112, 323
- , —, and —. Note on the ultraviolet absorption spectrum of tyrosine, 114, 665
- Ferry, J. D. See FRIEND, FERRY, and ONCLEY, 123, xxxix
- Ferry, Ronald M., and Levy, Albert H. The antigenic behavior of the carbohydrate present in egg albumin, 105, xxvii
- , Cohn, Edwin J., and Newman, Ethel S. The solvent action of neutral salts upon albumins in solutions of low dielectric constant, 109, xxxii
- , —, and —. The solvent action of neutral salts upon carboxyhemoglobin in solutions of low dielectric constant, 114, xxxiv
- See COHN, SALTER, and FERRY, 123, xxiv
- Field, Henry, Jr. See MELNICK and FIELD, 123, lxxxiii
- Fieser, L. F., and Newman, M. S. Ouabain, 114, 705
- Fife, J. M., and Frampton, V. L. The effect of carbon dioxide upon the pH and certain nitrogen fractions of the sugar-beet plant, 109, 643
- Fincke, M. L., and Sherman, H. C. The availability of calcium from some typical foods, 110, 421
- Findley, Thomas. See WESTFALL, FINDLEY, and RICHARDS, 107, 661
- Fireman, Milton. See ANDERSON and FIREMAN, 109, 437
- Firor, W. M. See GROLLMAN, FIROR, and GROLLMAN, 109, 189
- Fishback, Hamilton. See CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER, 123, xx

- Fishberg, Ella H., and Dolin, B.**
 T. The biological action of strongly positive oxidation-reduction systems, 101, 159
- , **Bierman, William, and Weiss, Alter.** Chemical adjustments to high temperature, 114, xxxv
- and **Baum, Harry.** Methemoglobin formation by *Streptococcus viridans*, 123, xxxv
- Fisher, A. M., and Scott, D. A.**
 Peptic hydrolysis of insulin, 106, 289
- and —. The insulin content of the pancreas in cattle of various ages, 106, 305
- . See **SCOTT and FISHER**, 114, lxxxviii
- and **Scott, D. A.** The prolongation of insulin action, 119, xxxiii
- Fisher, John H.** See **PYLE, FISHER, and CLARK**, 119, 283
- Fisher, Robert E.** See **BUCHWALD, CORI, and FISHER**, 103, 763
- , **Russell, Jane A., and Cori, Carl F.** Glycogen disappearance and carbohydrate oxidation in hypophysectomized rats, 115, 627
- Fishman, Jacob B., and White, Abraham.** The availability of *dl*-amino-N-methylhistidine for growth, 113, 175
- . See **WHITE and FISHMAN**, 116, 457
- Fishman, W. H.** Studies on β -glucuronidase, 123, xxxvi
- Fitz, Fred.** The application to the colorimeter of the Schoenheimer and Sperry method for the determination of total and free cholesterol, 109, 523
- and **Bruger, Maurice.** The effect of dextrose ingestion on the cholesterol fractions of the blood, 113, 297
- and —. Variations in blood cholesterol following the intravenous administration of cholesterol, 114, xxxv
- Fitz-Hugh, Thomas, Jr., Robson, George M., and Drabkin, David L.** Hemoglobin production. IV. Evaluation of therapeutic agents in anemia, due to milk diets, based on a study of the blood and bone marrow of rats from birth to maturity, 103, 617
- Flanigan, G. E.** See **SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER**, 113, 787
- . See **SUPPLEE, ANSBACHER, BENDER, and FLANIGAN**, 114, 95
- Fleming, Thomas A., and Macalium, A. Bruce.** Studies on urochrome, 109, xxxiii
- Fletcher, Jean P., and Waters, E. T.** The influence of fructose on the glucose tolerance curve of normal and depancreatized animals, 119, xxxiii
- Flexner, Louis B.** A thermodynamic analysis of ultrafiltration. The ultrafiltration of sucrose and colloidal solutions, 121, 615

- Flock, Eunice, Bollman, Jesse L., and Mann, Frank C.** The effect of diet upon the phosphate compounds in the liver of the dog, 114, xxxvi
- , —, and —. Effect of diet on phosphate compounds in the liver of the dog, 115, 179
- , —, and —. Effect of certain substances on the phosphate compounds in the liver of the dog, 115, 201
- . Effect of autolysis on the phosphate compounds in the liver of the dog, 115, 207
- , **Bollman, Jesse L., Hester, Harold R., and Mann, Frank C.** Fatty livers in geese, produced by overfeeding, 119, xxxiii
- , —, —, and —. Fatty livers in the goose produced by overfeeding, 121, 117
- , —, and **Mann, Frank C.** The metabolism of pyruvic acid, 123, xxxvi
- , —, and —. The utilization of pyruvic acid by the dog, 125, 49
- , —, —, and **Kendall, Edward C.** The effect of the intravenous injection of glucose and other substances on the concentration of potassium in the serum of the dog, 125, 57
- Flosdorf, Earl W.** See **CHAMBERS and FLOSDORF**, 114, 75
- and **Webster, G. W.** The determination of residual moisture in dry biological substances, 121, 353
- Flynn, Albert.** See **BEARD and BOGGESS**, 114, 771
- Folin, Otto.** Standardized methods for the determination of uric acid in unlaked blood and in urine, 101, 111
- . The preparation of sodium tungstate free from molybdate, together with a simplified process for the preparation of a correct uric acid reagent (and some comments), 106, 311
- Forbes, J. C.** Effect of carbon dioxide on calcium and phosphorus retention, 107, 283
- . Studies on the prevention of liver cirrhosis by the subcutaneous injection of a liver preparation, 123, xxxvii
- Forbes, W. H.** See **DILL, FORBES, and HENDERSON**, 109, xxvii
- . See **DILL, DALY, and FORBES**, 117, 569
- Ford, Leonard A.** See **EVERSOLE, FORD, and THOMAS**, 104, 107
- Forman, Sylvan E.** See **CARR, FORMAN, and KRANTZ**, 123, xviii
- Foster, G. L.** A comparison of the effects of administration of iodide and diiodotyrosine on the iodine and thyroxine content of the thyroid, 104, 497
- , **Palmer, Walter W., and Leland, Jessica P.** A comparison of the calorogenic potencies of *l*-thyroxine, *dl*-thyroxine, and thyroid gland. With a note on the thyroxine content of the acid-soluble fraction of the peptic digest of thyroid protein. 115, 467

Foster, G. L.—*continued*

- See RITTENBERG, FOSTER,
and SCHOENHEIMER,

123, cii

- See SCHOENHEIMER, FOSTER,
RITTENBERG, and RATNER,

123, cv

- , Keston, Albert S., Rittenberg,
D., and Schoenheimer, Ru-
dolf. Deuterium as an indi-
cator in the study of inter-
mediary metabolism. XII.
The action of proteolytic en-
zymes on peptides in heavy
water, 124, 159

- See RITTENBERG, KESTON,
SCHOENHEIMER, and FOSTER,
125, 1

- , Rittenberg, D., and Schoen-
heimer, Rudolf. Deuterium
as an indicator in the study
of intermediary metabolism.
XIV. Biological formation of
deuteroamino acids, 125, 13

- Foster, Mary Louise.** See AN-
SLOW, FOSTER, and KLINGLER,
103, 81

- Foster, William C.** See Mc-
CLENDON and BRATTON,

123, 699

- See McCLENDON and RICE,
123, lxxxi

- Fouts, Paul J.** See HELMER,
FOUTS, and ZERFAS,

105, xxxvii

- , Lepkovsky, Samuel, Helmer,
O. M., and Jukes, Thomas H.
Effect of deficiencies of rat and
chick antidermatitis factors on
puppies on a synthetic diet,

119, xxxiv

- Fox, Denis L.** See MARKS and
Fox,

103, 269

- Fox, Sidney W.** See DUNN and
Fox,

101, 493

- See BERGMANN and FOX,

109, 317

- The preparation of citrul-
line by hydrolysis of arginine,
123, 687

- Foy, John R.** See STEKOL,
118, 155

- Fraenkel-Conrat, Heinz.** See
BERGMANN, FRUTON, and
FRAENKEL-CONRAT,

119, 35

- See BERGMANN and FRAEN-
KEL-CONRAT,

119, 707

124, 1

- Frampton, V. L.** See FIFE and
FRAMPTON,

109, 643

- Francis, C. C.** See HUNSCHER,
HUMMEL, MACY, TODD, and
FRANCIS,

119, lii

- Franke, Kurt W., and Moxon,
Alvin L.** An apparatus for
determining the rate of carbon
dioxide production during
yeast fermentation,

105, 415

- See PAINTER and FRANKE,

111, 643

114, 235

- Franks, W. R., and Creech, H. J.**
Chemo-antigens and carcino-
genesis, 123, xxxviii

- See HALL and FRANKS,

123, xlix

- Frayser, Lois.** See LEWIS and
FRAYSER,

110, 23

- Frazier, Ernestine.** See SWAN-
SON, TIMSON, and FRAZIER,
109, 729

- Fred, E. B.** See JOHNSON,
PETERSON, and FRED,

101, 145

- . See BAUMANN, STEENBOCK, INGRAHAM, and FRED, 103, 339
- Freed, S. Charles, Mirsky, I. Arthur, and Soskin, Samuel. A tungstic acid precipitation method for the extraction of estrogenic substance from urine, 112, 143
- Freeman, Smith, and Friedemann, Theodore E. A micro-method for the estimation of the fat-soluble ester glycerol contained in lymph, 108, 471
- , Kant, E. R., and Ivy, A. C. The serum calcium response to ingested calcium, 112, 1
- and Chen, Yen Ping. The effect of jaundiced blood upon normal dogs, with special reference to the serum phosphatase, 123, 239
- , — , and Ivy, A. C. On the cause of the elevation of serum phosphatase in jaundice, 124, 79
- Freiberg, Irene Koechig, and West, Edward S. Glycine synthesis in pseudohypertrophic muscular dystrophy, 101, 449
- French, C. S. The chromoproteins of photosynthetic bacteria, 123, xxxviii
- French, H. E. See McSHAN and FRENCH, 117, 111
- French, R. B., and Mattill, H. A. The endogenous nitrogen excretion in relation to the determination of biological value of protein, 114, xxxvii
- Freyberg, Richard H. See CALVERY and FREYBERG, 109, 739, xv
- Friedemann, Theodore E. See GRAESER, GINSBERG, and FRIEDEMANN, 104, 149
- . The fasting ketosis of monkeys. I, 105, 335
- . The excretion of ethyl alcohol in saliva and a rapid method for its determination, 105, xxviii
- . See FREEMAN and FRIEDEMANN, 108, 471
- and Klaas, Rosalind. The reaction of aldehydes and sugars with acetoacetic acid, 109, xxxiv
- and Brook, Theodore. The direct determination of ethyl alcohol in saliva without distillation, 114, xxxvii
- and Klaas, Rosalind. The determination of ethyl alcohol, 115, 47
- . The metabolism of sodium acetoacetate intravenously injected into dogs, 116, 133
- . The identification and quantitative determination of volatile alcohols and acids, 123, 161
- Friedgood, Harry B. See GREENSTEIN and FRIEDGOOD, 114, xlv
- Friedman, Max M. See BRODIE and FRIEDMAN, 120, 511
- , 124, 511
- Friend, D. G., Ferry, J. D., and Oncley, J. L. Dispersion of the dielectric constant of solutions of urinary proteins, 123, xxxix

- Fries, B. A., Ruben, S., Perlman, I., and Chaikoff, I. L.** Radioactive phosphorus as an indicator of phospholipid metabolism. II. The rôle of the stomach, small intestine, and large intestine in phospholipid metabolism in the presence and absence of ingested fat, 123, 587
- Fritz, J. C.** See **BURROWS, FRITZ, and TITUS,** 110, 39
- Froeschle, Paul F.** See **PIERCE, HAEGE, and FROESCHLE,** 119, lxxviii
- Frost, D. V., and Elvehjem, C. A.** Further studies on Factor W, 119, xxxiv
121, 255
- Fruton, Joseph S.** Oxidation-reduction potentials of ascorbic acid, 105, 79
- and **Clarke, H. T.** Chemical reactivity of cystine and its derivatives, 106, 667
- See **BERGMANN, ZERVAS, FRUTON, SCHNEIDER, and SCHLEICH,** 109, 325
- See **BERGMANN, ZERVAS, and FRUTON,** 111, 225
115, 593
- See **BERGMANN and FRUTON,** 117, 189
118, 405
- See **BERGMANN, FRUTON, and FRAENKEL-CONRAT,** 119, 35
- See **BERGMANN and FRUTON,** 124, 321
- Fry, Edith G.** See **LONG, LUKENS, and FRY,** 105, lii
- Fulmer, Ellis I.** See **STAVELY, CHRISTENSEN, and FULMER,** 111, 771, 785, 791
- Funk, Casimir.** The acidosis-producing hormone of normal urine, 105, xxix
- and **Funk, Ian Casimir.** The value of pyridine derivatives in nutrition, 119, xxxv
- Funk, Ian Casimir.** See **FUNK and FUNK,** 119, xxxv
- Furgason, W. H.** See **CHAMBERLIN, FURGASON, and HALL,** 121, 599

G

- Gaebler, Oliver Henry.** Isolation experiments on serum creatinine, 109, xxxv
- Precipitation of apparent creatinine from ultrafiltrates of normal sera, 114, xxxviii
- and **Price, W. H.** Effects of an anterior pituitary growth preparation on sulfur metabolism, 114, xxxix
- The apparent creatinine of serum and laked blood ultrafiltrates, 117, 397
- and **Abbott, Lynn DeForrest, Jr.** The picrate precipitate of serum ultrafiltrates, 119, xxxvi
- and **Price, W. H.** Effects of an anterior pituitary growth preparation on protein metabolism, 121, 497
- and **Abbott, Lynn DeForrest, Jr.** Isolation of creatinine from serum ultrafiltrates, 123, 119

- and **Bartlett, Paul**. Effects of thyroxine and thyrotropic hormone on the weight and nitrogen metabolism of dogs, 123, xl
- Gallagher, T. F., and Koch, F. C.** The effect of alkali on the testicular hormone, 104, 611
- and —. Purification of bull testis extracts, 105, xxx
- See **Koch and Gallagher**, 105, xlix
- See **Willier, Gallagher, and Koch**, 109, xcix
- and **Koch, F. C.** The comb growth reaction to synthetic male hormone preparations, 114, xxxix
- See **Peterson, Gallagher, and Koch**, 119, 185
- See **Duncan, Gallagher, and Koch**, 119, xxvii
- See **Peterson, Gallagher, and Koch**, 119, lxxvii
- Gallup, Willis D., and Reder, Ruth**. The reaction between gossypol and calcium and its physiological importance, 109, xxxvi
- and **Norris, L. C.** Studies of the perosis-preventing properties of manganese, 119, xxxvi
- Gamble, Clarence James**. See **Cool, Gamble, and Starr**, 105, 97
- Garavelli, Louise A.** See **Laug and Nash**, 108, 479
- Gardner, R. E.** See **Martin and Gardner**, 111, 193
- Garner, R. L.** The fibrinolytic enzyme of hemolytic streptococci, 109, xxxvi
- See **Rodney and Garner**, 125, 209
- Garvin, Thelma M.** See **Schutte, Garvin, and Schwoegler**, 107, 635
- Gary, Wilbur Y.** See **Sands and Gary**, 101, 573
- Gavin, Gertrude**. See **McHenry and Gavin**, 125, 653
- Gerard, R. W.** See **Engel and Gerard**, 112, 379
- See **Kharasch, Legault, Wilder, and Gerard**, 113, 537, 557
- Gerchick, Elias**. See **Sobel, Pearl, Gerchick, and Kramer**, 118, 47
- German, Bernard, and Wyman, Jeffries, Jr.** The titration curves of oxygenated and reduced hemoglobin, 117, 533
- Gersdorff, Charles E. F.** See **Jones and Gersdorff**, 101, 657
104, 99
105, xlii
- See **Block, Jones, and Gersdorff**, 105, 667
- See **Jones and Gersdorff**, 106, 707
114, liii
- See **Jones, Gersdorff, and Phillips**, 122, 745
- See **Jones and Gersdorff**, 123, lxiv
- Gerstenberger, Henry J.** Effect of parenteral administration of salt solutions on calcification *in vivo* of bones of monkeys made rachitic by light deficiency, 123, xli

- Ghantus, Musa.** See **AVERY, KERR, and GHANTUS,** 110, 637
- See **KERR and GHANTUS,** 116, 9
117, 217
- See **KERR, HAMPEL, and GHANTUS,** 119, 405
- Gibson, John G., 2nd.** See **EVELYN and GIBSON,** 122, 391
- Gibson, R. B., and Lowe, R. C.** Isolation of bilirubin from hog bile, 123, xli
- See **PAUL and GIBSON,** 123, xci
- Gildea, Edwin F.** See **HIMWICH, GILDEA, RAKIETEN, and DuBois,** 113, 383
- See **MAN and GILDEA,** 119, 769
122, 77
- Gillaspie, Athey G.** See **BERNHEIM, BERNHEIM, and GILLASPIE,** 114, 657
- Gilligan, D. Rourke, Volk, Marie C., and Altschule, Mark D.** The diffusibility of plasma calcium following parathormone administration. Comparison of the calcium, phosphate, and protein concentrations of serum and edema fluids, 103, 745
- Gillum, Frances.** See **OKEY, GODFREY, and GILLUM,** 124, 489
- Gillum, Helen L.** See **OKEY, GILLUM, and YOKELA,** 107, 207
- See **OKEY and GILLUM,** 109, lxxii
- Gilman, Alfred.** See **ROE, GILMAN, and COWGILL,** 105, lxxii
- Gilson, Lewis E.** A simplified method of preparing histidine, 124, 281
- Ginsberg, Julius E.** See **GRAESER, GINSBERG, and FRIEDEMANN,** 104, 149
- Gisvold, Ole.** See **HALL and GISVOLD,** 109, 585
113, 487
- Givens, Maurice H., and Macy, Icie G.** The chemical composition of the human fetus, 102, 7
- Glick, David.** See **SOBOTKA and GLICK,** 105, 199, 221
- The chemical determination of minute quantities of vitamin C, 109, 433
- and **Biskind, Gerson R.** The histochemistry of the adrenal gland. I. The quantitative distribution of vitamin C, 110, 1
- and —. II. The quantitative distribution of lipolytic enzymes, 110, 575
- and —. The histochemistry of the hypophysis cerebri. The quantitative distribution of vitamin C, 110, 583
- See **BISKIND and GLICK,** 113, 27
- and **Biskind, Gerson R.** Studies in histochemistry. VI. The quantitative distribution of vitamin C in the small intestine, 113, 427
- and —. VII. The concentration of vitamin C in the thymus in relation to its histo-

- logical changes at different stages of development and regression, 114, 1
- and —. IX. The quantitative distribution of vitamin C in the adrenal gland at various stages of development, 115, 551
- . Choline esterase and chemical mediation of nerve impulses, 123, xlii
- . Studies on the specificity of choline esterase, 125, 729
- Goddard, David R., and Michaelis, Leonor. A study on keratin, 106, 605
- and —. Derivatives of keratin, 112, 361
- Godfrey, Lois Stewart. See OKEY, GODFREY, and GILLUM, 124, 489
- Goebel, Walther F., and Babers, Frank H. Derivatives of glucuronic acid. III. The synthesis of diacetylchloroglucuron, 101, 173
- and —. The influence of the acetyl group in orienting the immunological specificity of carbohydrates, 105, xxx
- . See BABERS and GOEBEL, 105, 473
- and Babers, Frank H. Derivatives of glucuronic acid. IV. The synthesis of α - and β -tetraacetylglucuronic acid methyl ester and of 1-chlorotriacetylglucuronic acid methyl ester, 106, 63
- . Chemo-immunological studies on the soluble specific substance of pneumococcus. II. The chemical basis for the immunological relationship between the capsular polysaccharides of Types III and VIII pneumococcus, 110, 391
- and Babers, Frank H. Derivatives of glucuronic acid. V. The synthesis of glucuronides, 110, 707
- and —. VI. The preparation of α -chloro- and α -bromotriacetylglucuronic acid methyl ester, and the synthesis of β -glucuronides, 111, 347
- and Goodner, Kenneth. The immunological properties of artificial antigens containing glucose and glucuronic acid, 114, xl
- . See HOTCHKISS and GOEBEL, 115, 285
- . 121, 195
- . Derivatives of glucuronic acid. VIII. The structure of benzoylglucuronic acid, 122, 649
- and Reeves, Richard E. The synthesis of aldobionides and the relationship of the molecular rotations of acetylated derivatives of glucose, gentiobiose, and cellobiose to those of the corresponding uronic acid methyl esters, 123, xlii
- and —. Derivatives of glucuronic acid. IX. The synthesis of aldobionides and the relationship between the molecular rotation of derivatives of acetylated aldoses and uronic acids, 124, 207

- Goerner, Alfred.** Oxidation of glucose by air in the presence of iron pyrophosphate, 105, 705
- . Effect of dibenzanthracene on vitamin A and total lipid of mitochondria, 122, 529
- and **Goerner, M. Margaret.** Vitamin A and tumor mitochondria, 123, 57
- Goerner, M. Margaret.** See **GOERNER and GOERNER,** 123, 57
- Goetsch, Carl.** See **ALLEN and GOETSCH,** 116, 653
- Goettsch, E., and Kendall, Forrest E.** Analysis of albumin and globulin in biological fluids by the quantitative precipitin method, 109, 221
- . See **WEECH, REEVES, and GOETTSCH,** 113, 167
- Goettsch, Marianne, and Pappenheimer, Alwin M.** The protective action of non-saponifiable matter of soy bean oil in nutritional encephalomalacia of chicks, 114, xl
- and —. The prevention of nutritional encephalomalacia in chicks by vegetable oils and their fractions, 114, 673
- . See **FENN and GOETTSCH,** 120, 41
- Golden, June B.** See **SEVRINGHAUS, HELLER, LAUSON, and GOLDEN,** 123, cvii
- Goldfarb, Abraham R.** See **SOBEL, GOLDFARB, and KRAMER,** 108, 395
- Goldfarb, Walter, and Himwich, Harold E.** Ketone substance production and destruction in certain tissues of diabetic dogs, 101, 441
- , **Barker, S. B., and Himwich, Harold E.** A study of ketosis in the phlorhizinized rat, 105, 283
- , —, and —. A study of ketosis in fasted and fat-fed rats, 105, 287
- . A study of ketosis in Primates, 116, 787
- Goodell, M.** See **SAHYUN, GOODELL, and NIXON,** 117, 685
- Goodner, Kenneth.** See **GOEBEL and GOODNER,** 114, xl
- Goodwin, Willard.** See **DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT,** 117, 119
- . See **BUTTS, BLUNDEN, GOODWIN, and DEUEL,** 117, 131
- Gordon, Wayne.** See **ALVING and GORDON,** 120, 103
- Gordon, William G.** See **VICKERY and GORDON,** 103, 543
- and **Jackson, Richard W.** The metabolism of certain monomethyltryptophanes, 110, 151
- , **Kaufman, Robert E., and Jackson, Richard W.** The excretion of kynurenic acid by the mammalian organism. A method for the identification of small amounts of kynurenic acid, 113, 125
- . The availability of α -N-monomethyllysine and α -N-dimethyllysine for growth, 119, xxxvii

- The availability of *d*- and *dl*-amino-N-methyltryptophane for growth, 123, xliii
- Gortner, Ross Aiken. See HESSLER and GORTNER, 119, 193
- See JACKSON and GORTNER, 123, 719
- Goss, Harold, and Kleiber, Max. Basal metabolism of rats on a phosphorus-deficient diet, 119, xxxviii
- Goss, M. J. See PHILLIPS and Goss, 114, 557
- 125, 241
- von Gottberg, Klemens. See SCHOENHEIMER, DAM, and VON GOTTBURG, 110, 659, 667
- Goudsmit, Arnoldus, Jr., and Summerson, William H. A variable layer photoelectric comparison photometer. A new type of photoelectric colorimeter, 111, 421
- On the origin of urinary creatinine, 115, 613
- Gould, Bernard S., and Sizer, Irwin W. The mechanism of bacterial dehydrogenase activity *in vivo*. I. Anaerobic dehydrogenase activity of *Escherichia coli* as a function of temperature, 124, 269
- Gould, Charles. See DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT, 117, 119
- Gould, R. Gordon, Jr. The synthesis of a dihydrovitamin A, 114, xli
- See JACOBS and GOULD, 120, 141
- See CRAIG, SHEDLOVSKY, GOULD, and JACOBS, 125, 289
- Graeser, James B., Ginsberg, Julius E., and Friedemann, Theodore E. A method for the analysis of tissues, 104, 149
- Grafe, Karl. See BERGMANN and GRAFE, 110, 173
- Graff, Ada M. See GRAFF, MACULLA, and GRAFF, 121, 71
- See GRAFF and GRAFF, 121, 79
- See GRAFF, MACULLA, and GRAFF, 121, 81
- Graff, M. See SCHOENHEIMER, RITTENBERG, and GRAFF, 111, 183
- Graff, Samuel, and Maculla, Ada. The composition of the tissue proteins. I. The estimation of purines in tissues, 110, 71
- , Maculla, Esther, and Graff, Ada M. The composition of the tissue proteins. II. The estimation of arginine, 121, 71
- and Graff, Ada M. The composition of the tissue proteins. III. Arginine in the placenta, 121, 79
- , Maculla, Esther, and Graff, Ada M. The composition of the tissue proteins. IV. The estimation of cystine, 121, 81
- Graham, W. R., Jr., Houchin, O. B., and Turner, C. W. The production of urea in the mammary gland, 120, 29

Graham, W. R., Jr.—*continued*

- The utilization of lactic acid by the lactating mammary gland, 122, 1
- , Peterson, V. E., Houchin, O. B., and Turner, C. W. The utilization of fractions of the nitrogen partition of the blood by the active mammary gland, 122, 275
- Gralén, Nils. See SUMNER and GRALÉN, 125, 33
- See SUMNER, GRALÉN, and ERIKSSON-QUENSEL, 125, 37, 45
- Grant, R. Lorimer. See LEWIS and GRANT, 105, lii
- and Lewis, Howard B. Some products of partial hydrolysis of silk fibroin, 108, 667
- Grattan, Jerome F. See THANNHAUSER, REICHEL, and GRATTAN, 121, 697
- See THANNHAUSER, REICHEL, GRATTAN, and MADDOCK, 121, 709, 715, 721, 727, 124, 631
- Graubard, Mark, and Nelson, J. M. Tyrosinase action on mono- and dihydric substrates, 111, 757
- and —. On the quantitative measurement of the enzyme tyrosinase, 112, 135
- Gray, E. LeB. See BILLS, MASENGALE, HICKMAN, and GRAY, 123, x
- Greaves, Joseph D., and Schmidt, Carl L. A. The rôle played by bile in the absorption of vitamin D in the rat, 102, 101

- and —. On the absorption and utilization of β -carotene in jaundiced and in choledochostomized vitamin A-deficient rats, 105, xxxi
- Green, Arda Alden. See MARGARIA and GREEN, 102, 611
- See ROOT and GREEN, 106, 545
- , Cohn, Edwin J., and Blanchard, Muriel H. Studies in the physical chemistry of the proteins. XII. The solubility of human hemoglobin in concentrated salt solutions, 109, 631
- and McKhann, Charles F. Immune globulins in the placenta, 109, xxxvii
- , Lowry, Hope, Eley, R. C., and McKhann, Charles F. The blood coagulant derived from the placenta, 114, xlii
- The euglobulins of serum and their combination with acid and base, 119, xxxix
- The globulin fractions of antipneumococcus serum, 123, xlv
- Green, David F. See GUSTAVSON and GREEN, 105, xxxiv
- , Morris, Mark L., Cahill, George F., and Brand, Erwin. Canine cystinuria. II. Analysis of cystine calculi and sulfur distribution in the urine, 114, 91
- Greenberg, David M., and Tufts, Elma V. The formation of a colloidal form of calcium phosphate in the blood stream in experimental hypercalcemia, 105, xxxii

- The nature and amount of non-diffusible calcium in protein sols. Remarks on the paper by Eversole, Ford, and Thomas, 105, 511
- See ALMQUIST and GREENBERG, 105, 519
- and Larson, Clarence E. Evidence of adsorption experiments on the forms of calcium and inorganic phosphorus in blood serum, 109, 105
- The influence of certain liver poisons on the action of parathyroid extract, 109, xxxviii
- and Tufts, Elma V. The effect of a diet low in magnesium on the rat, 109, xxxviii
- , Anderson, Carl E., and Tufts, Elma V. A note on a closed titration flask for use in the bromometric determination of magnesium with 8-hydroxyquinoline. Application to the estimation of magnesium in tissues and urine, 111, 561
- and Tufts, Elma V. Variations in the magnesium content of the normal white rat with growth and development, 114, 135
- , Anderson, Carl E., and Tufts, Elma V. Pathological changes in the tissues of rats reared on diets low in magnesium, 114, xliii
- and Larson, Clarence E. Remarks on the paper by Tendlow on a new and easy method for the potentiometric determination of calcium concentrations in solutions, 115, 769
- and —. Mathematical relations in the partition of the serum calcium, 119, xxxix
- and Tufts, Elma V. Biochemistry of magnesium deficiency, 119, xl
- See TUFTS and GREENBERG, 122, 693, 715
- See COHN and GREENBERG, 123, 185
- See LARSON and GREENBERG, 123, 199
- Greenberg, Max M. The effect of hydrazine on the production of acetone bodies in the phlorhizin-intoxicated animal, 112, 431
- Greenstein, Jesse P. Studies of the peptides of trivalent amino acids. III. The apparent dissociation constants, free energy changes, and heats of ionization of peptides involving arginine, histidine, lysine, tyrosine, and aspartic and glutamic acids, and the behavior of lysine peptides toward nitrous acid, 101, 603
- Studies of multivalent amino acids and peptides. I. The synthesis of certain tetravalent amino acids and their derivatives, 109, 529
- II. The synthesis of certain derivatives of lysylglutamic acid, 109, 541
- See COHN, McMEEKIN, and GREENSTEIN, 109, xxi
- and Joseph, Norman R. Studies of multivalent amino

- Greenstein, Jesse P.**—*continued*
 acids and peptides. IV. The apparent dissociation constants of α -aminotricarballylic acid and of glycyl- α -aminotricarballylic acid, 110, 619
 —. Studies of multivalent amino acids and peptides. V. Cystine cyamidene, 112, 35
 —. VI. The action of proteolytic enzymes on certain synthetic substrates, 112, 517
 —. The synthesis of isocitric acid from citric acid, 114, xliii
 — and **Friedgood, Harry B.** The effect of certain substituted dithio acids on the blood sugar of rabbits, 114, xlv
 —. Studies of multivalent amino acids and peptides. VII. Derivatives of *dl*- α -aminotricarballylic acid, 116, 463
 —. VIII. The synthesis of bisanhydro-*l*-cystinyl-*l*-cystine and other diketopiperazines of cystine, 118, 321
 —. The synthesis of crystalline *l*-cysteinyl-*l*-cysteine hydrochloride, 119, xli
 —. Studies of multivalent amino acids and peptides. IX. The synthesis of *l*-cystinyl-*l*-cystine, 121, 9
 — and **Wyman, Jeffries, Jr.** The polarity of aminocyclohexane carboxylic acids, 123, xlv
 —. Studies of multivalent amino acids and peptides. X. Cystinyl peptides as substrates for aminopolypeptidase and dipeptidase, 124, 255
 —. Sulfhydryl groups in proteins. I. Egg albumin in solutions of urea, guanidine, and their derivatives, 125, 501
 —, **Klemperer, Friedrich W.**, and **Wyman, Jeffries, Jr.** Studies on the physical chemistry of cystinyl peptides, 125, 515
Greenwald, Isidor, and Rubin, S. H. The state of calcium in serum and in plasma, 114, xlv
 —. The dissociation of some calcium salts, 123, xlv
 124, 437
Greulich, William Walter. See **DORFMAN** and **GREULICH**, 119, xxv
Griffith, Wendell H. The influence of protein metabolism on the synthesis of glycine, 105, xxxiii
 —. Errors in bioassay: some unusual effects of inorganic salts on the detoxication of benzoic acid in rats, 109, xxxix
 —. See **SHEPPECK** and **GRIFFITH**, 114, xcii
 —. A toxic effect of sodium hippurate, 123, xlv
Grollman, Arthur, Firor, W. M., and **Grollman, Ellis.** Studies on the adrenal. VIII. A simple preparation of the adrenal cortical hormone suitable for oral administration, 109, 189
Grollman, Ellis. See **GROLLMAN**, **FIROR**, and **GROLLMAN**, 109, 189

- Gross, Joseph. See BENJAMIN, HESS, and GROSS, 103, 383
- Gruner, J. W., McConnell, Duncan, and Armstrong, W. D. The relationship between crystal structure and chemical composition of enamel and dentin, 121, 771
- Grunewald, Carl F. See DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD, 101, 301
- See DEUEL, GULICK, GRUNEWALD, and CUTLER, 104, 519
- , Cutler, Charles H., and Deuel, Harry J., Jr. The sexual variation in carbohydrate metabolism. V. The metabolism of diacetic acid in normal and castrated male and female rats with and without theelin, 105, 35
- Guerrant, N. B., Dutcher, R. Adams, and Tomey, L. F. The effect of the type of carbohydrate on the synthesis of the B vitamins in the digestive tract of the rat, 110, 233
- , Chornock, Francis, and Dutcher, R. Adams. Studies concerning the production and cure of florid dermatitis (acrodynia) in the rat, 119, xlii
- Guerrant, Ralph E. See HOGAN and GUERRANT, 114, li
- See HOGAN, GUERRANT, and RITCHIE, 115, 659
- Guest, George Martin, and Leva, Ernst. An electric heater designed to prevent losses from creeping in the evaporation of concentrated salt solutions preliminary to mineral analysis, 110, 777
- and Holmes, Frederic E. A pipette for storage of air-free reagents used in gasometric analysis, 110, 781
- and Rapoport, S. Studies of diphosphoglyceric acid in blood cells, 123, xlvii
- and —. Effects of overdosage of irradiated ergosterol in rabbits: changes of diphosphoglyceric acid in the blood cells, 124, 599
- Guest, Gordon H., and McFarlane, W. D. The formation of pyrrole by the dry distillation of proteins, 123, xlvii
- Guest, M. Mason. On the determination of glycogen in muscle, 123, xlviii
- Guiteras, Albert F., and Schmלקes, Franz C. The comparative action of sodium hypochlorite, chloramine-T, and azochloramid on organic substrates, 107, 235
- Gulick, Margaret. See DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD, 101, 301
- See DEUEL, GULICK, GRUNEWALD, and CUTLER, 104, 519
- , Samuels, Leo T., and Deuel, Harry J., Jr. The sexual variation in carbohydrate metabolism. IV. The effect of ovariectomy and theelin administration on the glycogen content of rats, 105, 29
- See ERICKSON, GULICK, HUNSCHER, and MACY, 106, 145

- Gunther, J. Kenneth. See ROSE, KEMMERER, WOMACK, MERTZ, GUNTHER, MCCOY, and MEYER, 114, lxxxv
- and Rose, William C. The relation of alanine to growth, 123, 39
- Gurin, Samuel, and Clarke, H. T. Allocation of the free amino groups in proteins and peptides, 107, 395
- , Bachman, C., and Wilson, D. Wright. The gonadotropic hormone of pregnancy urine, 123, xlix
- Gustavson, R. G., and Green, David F. The quantitative determination of the amount of estrogenic substances excreted daily in the urine of the normal human female, 105, xxxiv
- , Wood, Thomas R., and Hays, Edwin E. A further quantitative study of the estrogenic substances in normal human female urine, 114, xlv
- , Hays, Edwin E., and Wood, Thomas R. The quantitative determination of estrogenic substances in normal female urine during the menstrual cycle, 119, xlii
- Gustus, Edwin L., Meyer, Roland K., and Woods, Oliver R. Preparation of the gonadotropic hormone of pregnant mare blood, 114, 59
- Gutman, Alexander B. See PALMER, LELAND, and GUTMAN, 125, 615
- György, Paul. Attempts to isolate the anti-egg injury factor (vitamin H), 119, xliii

H

- Haag, J. R., and Jones, I. R. The calcium and inorganic phosphorus content of the blood plasma of normal dairy cattle, 110, 439
- Haddad, Matile. See HELLER and HADDAD, 113, 439
- Haeghe, Lorraine. See PIERCE, HAEGE, and FROESCHLE, 119, lxxviii
- See PIERCE and HAEGE, 123, xciii
- Hafner, Paul G., Swinney, Robert H., and West, Edward S. Hydroxylated acids of fats: an improved method of determination, 116, 691
- Hahn, P. F. Liver injury and blood lactic acid, 101, 29
- and Fairman, E. The copper content of some human and animal tissues, 113, 161
- Hald, Pauline M. The determination of the bases of serum and whole blood, 103, 471
- A note on the gravimetric determination of total base of serum and blood. A correction, 105, 675
- and Eisenman, Anna J. The distribution of bases between cells and serum of normal human blood, 118, 275
- See EISENMAN, HALD, and PETERS, 118, 289
- Hale, W. S. See BALLS and HALE, 107, 767
- Halenz, H. F. See WAKEHAM and HALENZ, 115, 429
- Haley, Frank L., and Samuelson, George S. Cystine metab-

- olism. II. Detoxication of monobromobenzene, 119, 383
- Hall, F. G. The effect of altitude on the affinity of hemoglobin for oxygen, 115, 485
- Hall, G. E., and Franks, W. R. Physiological carcinogenesis, 123, xlix
- Hall, Helen. See BILLS, McDONALD, MASSENGALE, IMBODEN, HALL, HERBERT, and WALLENMEYER, 109, vii
- Hall, J. Alfred, and Gisvold, Ole. Chemistry of slash-pine (*Pinus caribæa*, Morelet). I. Fatty constituents of the phloem, 109, 585
- and —. II. Fats, waxes, and resins of the growing tips, 113, 487
- Hall, J. Lowe. See SHENK, HALL, and KING, 105, 741
- See KLEIN, HALL, and KING, 105, 753
- Hall, James Lowell. See HASTINGS, McLEAN, EICHELBERGER, HALL, and DA COSTA, 107, 351
- Hall, S. R. See BUTZ and HALL, 119, xvi
- Hall, V. E. See CHAMBERLIN, FURGASON, and HALL, 121, 599
- Halliday, Nellie. Further investigations concerning the new vitamin B growth-promoting factor for rats, found in whole wheat, 106, 29
- and Evans, Herbert M. On the fractionation of the vitamin B₂ complex from various source materials, 110, 255
- Hallman, Lois F. See BODANSKY, 101, 93
- 104, 473, 717
- See BUTTS, CUTLER, HALLMAN, and DEUEL, 109, 597
- See DEUEL, BUTTS, HALLMAN, and CUTLER, 112, 15
- See BUTTS, DUNN, and HALLMAN, 112, 263
- See DEUEL, HALLMAN, BUTTS, and MURRAY, 116, 621
- See DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT, 117, 119
- See DEUEL, HALLMAN, and MURRAY, 119, 257, xxii
- See DEUEL, HALLMAN, MURRAY, and SAMUELS, 119, 607
- See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN, 119, 617
- See DEUEL, MURRAY, HALLMAN, and TYLER, 120, 277
- See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN, 123, 257
- See BUTTS, DUNN, and HALLMAN, 123, 711
- See DEUEL, HALLMAN, and MURRAY, 123, xxix
- 124, 385
- See DEUEL, HALLMAN, MURRAY, and HILLIARD, 125, 79
- Hallstone, V. E. See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN, 123, 257
- See DEUEL, HALLMAN, MURRAY, and HILLIARD,

- Halpern, Lena. The transfer of inorganic phosphorus across the red blood cell membrane, 114, 747
- Halpern, Rebecca. See KLEINER and HALPERN, 101, 535
- Halpin, J. G. See KEENAN, KLINE, ELVEHJEM, HART, and HALPIN, 103, 671
- Haman, Robert W., and Steenbock, H. The antirachitic effectiveness of vitamin D from various sources, 114, 505
- Hamill, William H. See STEKOL and HAMILL, 120, 531
- Hamilton, Bengt, and Schwartz, Ruth. The composition of tissues in dehydration, 109, 745
- Hamilton, R. H., Jr. See McCLENDON, HAMILTON, and HOLDRIDGE, 105, lviii
- Hammett, Frederick S. *d*-Lysine and growth, 119, xlv
- Hampel, C. W. See KERR, HAMPPEL, and GHANTUS, 119, 405
- Hand, David B. The refractivity of protein solutions, 108, 703
- The molecular weight and volume of hemoglobin in urea solutions, 109, xl
- Handler, Philip. See CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER, 123, xx
- Hanes, Frederic M. See REISER and HANES, 123, ci
- Hanford, Zaida M. See SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER, 113, 787
- Hanke, Martin E., and Johnson, Martha. An interpretation of the drift in potential in the quinhydrone pH method on blood or blood serum, 109, xl
- See JOHNSON and HANKE, 114, 157
- See KENDRICK and HANKE, 114, lviii
- 117, 161
- Hanna, Marion I. See CAMPBELL and HANNA, 119, 1, 9, 15
- Hanner, James P. See WILSON and HANNER, 106, 323
- Hansen, Arild E. See WILSON and HANSEN, 112, 457
- , Wilson, William R., and Williams, Harold H. Serum lipid changes in relation to the intermediary metabolism of fat, 114, 209
- Hanzal, Ramon F. See BING, HANZAL, and MYERS, 109, viii
- Harding, Victor John, and Downs, C. E. Notes on a Shaffer-Somogyi copper reagent, 101, 487
- Hardy, J. I. See SULLIVAN, HESS, HARDY, and HOWE, 109, xc
- Harger, R. N., Hulpieu, H. R., and Lamb, E. B. The speed with which various parts of the body reach equilibrium in the storage of alcohol, 119, xlv
- , —, and —. The speed with which various parts of the body reach equilibrium in the storage of ethyl alcohol, 120, 689
- , Johnson, Steven L., and Bridwell, E. G. Detection and

- estimation of methanol, with results in human cases of methanol poisoning, 123, p. 1
- Harkins, William D., and Anderson, Thomas F. Protein monolayers: films of oxidized cytochrome C, 125, 369
- Harkness, E. V. See VENNING, EVELYN, HARKNESS, and BROWNE, 120, 225
- Harmon, J. See DU VIGNEAUD, DYER, and HARMON, 101, 719
- Harned, Ben K., and Deere, Charles J. The induced oxidation of cyanide, 104, 727
- See COLE and HARNED, 123, xxv
- and Cole, Versa V. The effect of physostigmine on the blood sugar of rats with demedullated adrenals, 123, li
- Harrer, Carter J. See STOTZ, HARRER, and KING, 119, xcv, 511
- See STOTZ, HARRER, SCHULTZE, and KING, 120, 129
- 122, 407
- Harris, J. S. See KLEIN and HARRIS, 124, 613
- Harris, Meyer M. See BRAND, CAHILL, and HARRIS, 109, 69
- See BLOCK, BRAND, HARRIS, and HINSIE, 114, xii
- Harris, Robert S., and Bunker, John W. M. The antirachitic property of casein, 119, xlv
- Harris, Stanton A. See LEVENE and HARRIS, 101, 419
- See LEVENE, HARRIS, and STILLER, 105, 153
- See LEVENE and HARRIS, 111, 725, 735
- 112, 195
- 113, 55
- Harrison, Harold E., Darrow, Daniel C., and Yannet, Herman. The total electrolyte content of animals and its probable relation to the distribution of body water, 113, 515
- The sodium content of bone and other calcified material, 120, 457
- and Darrow, Daniel C. A volumetric method for determination of potassium in biological materials, 121, 631
- See DARROW and HARRISON, 123, xxvii
- Harrison, Tinsley R. See CULLEN, WILKINS, and HARRISON, 102, 415
- See MASON, RESNIK, and HARRISON, 109, lix
- See MASON, BLALOCK, and HARRISON, 114, lxiv
- Harrow, Benjamin, Mazur, Abraham, and Sherwin, Carl P. Studies in acetylation. The fate of *p*-aminobenzoic acid in the rabbit, 102, 35
- , —, Borek, Ernest, and Sherwin, Carl P. Studies in acetylation. II. The effect of various substances upon the formation of *p*-acetylaminobenzoic acid in the rabbit, 105, xxxiv
- and Naiman, Barnett. The male hormone. The effect of

Harrow, Benjamin—*continued*

- the male hormone, the anterior pituitary-like hormone, and the fat metabolism hormone upon the genital tracts of immature male and female rats, 105, xxxv
- , Mazur, Abraham, Chamelin, I. M., and Lesuk, Alex. Concentration of a hyperglycemic factor from urine, 119, xlv
- Hart, Anna.** See GOETTSCH and PAPPENHEIMER, 114, 673
- Hart, E. B.** See ELVEHJEM, HART, and SHERMAN, 103, 61
- See KEENAN, KLINE, ELVEHJEM, HART, and HALPIN, 103, 671
- See PHILLIPS, HART, and BOHSTEDT, 105, 123
- See SCHULTZE, ELVEHJEM, and HART, 106, 735
- See KLINE, ELVEHJEM, KEENAN, and HART, 107, 107
- See SHERMAN, ELVEHJEM, and HART, 107, 289, 383
- See STIRN, ELVEHJEM, and HART, 109, 347
- See PHILLIPS and HART, 109, 657
- See KOHLER, ELVEHJEM, and HART, 113, 49
- See BIRD, ELVEHJEM, and HART, 114, x
- See SCHULTZE, ELVEHJEM, and HART, 115, 453
116, 93, 107
- See ARNOLD, KLINE, ELVEHJEM, and HART, 116, 699
- See PEARSON, ELVEHJEM, and HART, 119, 749
- See SCHANTZ, ELVEHJEM, and HART, 122, 381
- Hart, J. P., Sheppard, Fay, and Everett, Mark R.** Preparation of sugar acids from *d*-glucose, 123, lii
- Hartman, Arthur M., Kane, Edward A., and Shinn, Leo A.** Does the carotene in alfalfa hay account completely for its vitamin A activity? 105, xxxvi
- The toxicity of calciferol for rabbits, 119, xlv
- Hartman, Ernest.** See PIERCE and HARTMAN, 123, xciv
- Hartzler, Eva R.** A note on the determination of potassium by the method of Shohl and Bennett, 122, 19
- Hassid, W. Z., and Chandler, W. L.** The isolation of a new polysaccharide synthesized by a soil microorganism, 117, 203
- and Chaikoff, I. L. The molecular structure of liver glycogen of the dog, 123, 755
- Hastings, A. Baird.** See SHOCK and HASTINGS, 104, 565
- and Shock, Nathan W. Studies of the acid-base balance of the blood. II. A nomogram for calculation of acid-base data for blood, 104, 575
- See SHOCK and HASTINGS, 104, 585
- See BARRON and HASTINGS, 105, vii
- See McLEAN and HASTINGS, 105, lx
- See MORSE, SCHLUTZ, and HASTINGS, 105, lxiv

- See McLEAN and HASTINGS, 107, 337
- , McLean, Franklin C., Eichelberger, Lillian, Hall, James Lowell, and Da Costa, Esther. The ionization of calcium, magnesium, and strontium citrates, 107, 351
- See BARRON and HASTINGS, 107, 567
- See McLEAN and HASTINGS, 108, 285
- See BARRON and HASTINGS, 109, iv
- and Eichelberger, Lillian. Salt and water exchange between blood and muscle, 109, xli
- See SHOCK and HASTINGS, 112, 239
- , Dill, D. B., and Edwards, H. T. The acid-base changes in the blood after anaerobic work, 114, xlvii
- See WEIR and HASTINGS, 114, 397
- and Eichelberger, Lillian. The exchange of salt and water between muscle and blood. I. The effect of an increase in total body water produced by the intravenous injection of isotonic salt solutions, 117, 73
- See EICHELBERGER and HASTINGS, 118, 197, 205
- See STOTZ and HASTINGS, 118, 479
- See BROWMAN and HASTINGS, 119, 241
- See MUUS, BESSEY, and HASTINGS, 119, lxxii
- See MANERY, DANIELSON, and HASTINGS, 124, 359
- See KLEMPERER, TRIMBLE, and HASTINGS, 125, 445
- Hathaway, Milicent L., and Koch, F. C. Provitamin D potencies, absorption spectra, and chemical properties of heat-treated cholesterol, 108, 773
- and Lobb, Dorothy E. The provitamin D of heat-treated cholesterol, 113, 105
- Hauge, Sigfred M. Evidence of enzymatic destruction of the vitamin A value of alfalfa during the curing process, 108, 331
- Haury, Victor G. See HIRSCHFELDER and SERLES, 104, 635
- See HIRSCHFELDER, 104, 647
- Haven, Frances L. The degree of unsaturation of phospholipid fatty acids of tumor tissue, 109, xlii
- The phospholipid metabolism of tumors, 114, xlvii
- , Bale, William F., and LeFevre, Marian L. Comparative distribution in the white rat of radioactive phosphorus fed as sodium phosphate and injected as phospholipid, 123, lii
- Hawkins, James A., and Shilling, Charles W. Nitrogen solubility in blood at increased air pressures, 113, 273
- and —. Helium solubility in blood at increased pressures, 113, 649

- Hawkins, Nora C.** See MORGAN, KIMMEL, and HAWKINS, 119, lxx
120, 85
- Hawkins, W. B.** See HOWLAND and HAWKINS, 123, 99
- Hawley, Estelle E.** See STEPHENS and HAWLEY, 115, 653
- Hayman, J. M., Jr., Johnston, S. M., and Bender, J. A.** On the presence of creatinine in blood, 108, 675
- Hays, Edwin E.** See GUSTAVSON, WOOD, and HAYS, 114, xlv
— See GUSTAVSON, HAYS, and WOOD, 119, xlii
- Heard, E. Virginia, and Lewis, Howard B.** The metabolism of sulfur. XXV. Dietary methionine as a factor related to the growth and composition of the hair of the young white rat, 123, 203
- Hecht, Morris, and Civin, Helen.** Studies on enzyme action. L. The estimation of pepsin and trypsin in yeast, 116, 477
- Hegnauer, A. H., and Cori, Gerty T.** The influence of epinephrine on chemical changes in isolated frog muscle, 105, 691
— and Robinson, E. J. The water and electrolyte distribution among plasma, red blood cells, and muscle after adrenalectomy, 116, 769
— See ROBINSON and HEGNAUER, 116, 779
— See CORI, CORI, and HEGNAUER, 120, 193
- Heidelberger, Michael, and Palmer, Walter W.** The preparation and properties of thyroglobulin, 101, 433
— and Menzel, Arthur E. O. Protein fractions of the human strain (H-37) of tubercle bacillus, 104, 655
— and Kendall, Forrest E. The rôle of multiple reactive groups in antigen-antibody union as illustrated by an instance of cross precipitation, 105, xxxvii
— See CALVERY, HEIDELBERGER, and KENDALL, 109, xv
— See KENDALL, HEIDELBERGER, and DAWSON, 118, 61
— and Menzel, Arthur E. O. Specific and non-specific cell polysaccharides of a human strain of tubercle bacillus, H-37, 118, 79
— See MENZEL and HEIDELBERGER, 124, 89, 301
- Heidt, Lawrence J.** The ultraviolet absorption spectra of thyroxine, thyronine, tyrosine, diiodotyrosine, and thyroglobulin, 115, 223
- Heinle, Robert W., and Bing, Franklin C.** Studies in the nutritional anemia of the rat. VIII. A method for the estimation of hemoglobin and erythrocytes on a single small sample of blood, 101, 369
- Heller, Carl G.** See SEVRINGHAUS, HELLER, LAUSON, and GOLDEN, 123, cvii

- Heller, Robert.** See **DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT,** 117, 119
- Heller, V. G., and Paul, Henry.** Effect of inorganic salt intake upon the mineral composition of the blood, 105, 655
- , —, and **Thompson, R. B.** Changes in the blood calcium and phosphorus partition during the life cycle of the chicken, 106, 357
- and **Haddad, Matile.** Paths of excretion and mineral balance in animals drinking saline and alkaline waters, 113, 439
- and **Pursell, Lee.** Chemical composition of the blood of the hen during its life cycle, 118, 549
- and —. Physiological effects of phenol-contaminated drinking waters, 119, xlv
- Hellerman, Leslie, and Perkins, Marie E.** Activation of enzymes. II. Papain activity as influenced by oxidation-reduction and by the action of metal compounds, 107, 241
- See **SCHWACHMAN, HELLERMAN, and COHEN,** 107, 257
- See **SCHOCK, JENSEN, and HELLERMAN,** 111, 553
- and **Perkins, Marie E.** Activation of enzymes. III. The rôle of metal ions in the activation of arginase. The hydrolysis of arginine induced by certain metal ions with urease, 112, 175
- See **STOCK, PERKINS, and HELLERMAN,** 125, 753
- and **Stock, C. Chester.** Activation of enzymes. V. The specificity of arginase and the non-enzymatic hydrolysis of guanidino compounds. Activating metal ions and liver arginase, 125, 771
- Helmer, O. M., and Emerson, Charles P., Jr.** The iron content of the whole blood of normal individuals, 104, 157
- , **Fouts, Paul J., and Zerfas, L. G.** The relation of the secretion of mucus to the acidity of the gastric juice, 105, xxxvii
- The determination of vitamins B₁ and B₂ in human urine, 114, xlviii
- See **FOUTS, LEPKOVSKY, HELMER, and JUKES,** 119, xxxiv
- Helz, George E.** See **BOSWORTH and HELZ,** 112, 489
- and **Bosworth, A. W.** The higher saturated fatty acids of butter fat, 116, 203
- Hempelmann, Louis H.** See **PREISLER and HEMPELMAN,** 114, lxxxi
- Henderson, L. J.** See **DILL, FORBES, and HENDERSON,** 109, xxvii
- Hendricks, Sterling B.** See **MARKLEY, HENDRICKS, and SANDO,** 111, 133
- See **MARKLEY, SANDO, and HENDRICKS,** 123, 641
- Hendrix, Byron M., and Wharton, P. S.** The effect of variation of pH upon the process of heat denaturation of egg albumin, 105, 633

Hendrix, Byron M.—*continued*

— and Paquin, Felix, Jr. The effect of denaturation of egg albumin upon its acetyl derivatives, 114, xlix

— and Dennis, Joe. Changes of nitrogen content brought about by denaturation of proteins, 123, liii

— and Paquin, Felix, Jr. The effect of alkali treatment upon acetyl proteins, 124, 135

Hendrix, James P. See BORDLEY, HENDRIX, and RICHARDS, 101, 255

—, Westfall, B. B., and Richards, A. N. Quantitative studies of the composition of glomerular urine. XIV. The glomerular excretion of inulin in frogs and *Necturi*, 116, 735

Hepburn, Joseph S., and Miraglia, Paul Reveri. A contribution to the chemistry of turkey eggs, 105, xxxviii

—, Paxson, Newlin F., and Rogers, Alan N. Secretion of ingested sulfanilamide in human milk and in the urine of the infant, 123, liv

Herbst, Robert M., and Clarke, H. T. Oxidation of amino acids by silver oxide, 104, 769

— and Engel, L. L. A reaction between α -ketonic acids and α -amino acids, 107, 505

— The oxidation of hexosamines: *d*-glucosamine and *d*-glucosaminic acid, 119, 85

Hergert, W. D. See BILLS, McDONALD, MASSENGALE, IMBODEN, HALL, HERGERT, and WALLENMEYER, 109, vii

Herrin, R. C. Chemical changes in blood and intestinal juice produced by the loss of intestinal juice, 108, 547

— Ammonia content, pH, and carbon dioxide tension in the intestine of dogs, 118, 459

Herriott, Roger M. See CALVERY, HERRIOTT, and NORTHROP, 109, xvi
113, 11

Herrmann, Cornelius L. See BODANSKY, 115, 641

— See BODANSKY, DUFF, and HERRMANN, 119, xiii

Herrmann, H. See BRAND, BRAND, and HERRMANN, 105, xiii

Hess, Alfred F. See BENJAMIN, HESS, and GROSS, 103, 383

— See BENJAMIN and HESS, 103, 629

Hess, W. C. See SULLIVAN and HESS, 102, 67

— The gasometric determination of cysteine and cystine, 103, 449

— The determination of cystine and cysteine in the presence of each other, 105, xxxix

— See SULLIVAN and HESS, 105, lxxxix

— and Sullivan, M. X. The determination of cystine and cysteine in butyl alcohol extracts, 108, 195

— Variations in amino acid content of finger nails of normal and arthritic individuals, 109, xliii

- See SULLIVAN, HESS, HARDY, and HOWE, 109, xc
- and Sullivan, M. X. The cystine content of deaminized proteins, 114, xlix
- See SULLIVAN, HESS, and IRREVERRE, 114, 633
- See SULLIVAN and HESS, 116, 221 117, 423
- and Sullivan, M. X. Further studies on the effect of aldehydes on cystine and cysteine, 119, xlvii
- See SULLIVAN and HESS, 119, xcvi
- See SULLIVAN, HOWARD, and HESS, 119, 721
- See SULLIVAN and HESS, 120, 537
- and Sullivan, M. X. Further studies on the effect of aldehydes on cystine and cysteine, 121, 323
- See SULLIVAN and HESS, 122, 11
- and Sullivan, M. X. Cystinuria; the effect of feeding methionine and cysteine on the excretion of cystine, 123, lv
- See NEGLIA, HESS, and SULLIVAN, 125, 183
- Hessler, Lyle E., and Gortner, Ross Aiken. The carbon metabolism of *Gibberella saubinetii* on glucose, 119, 193
- Hester, Harold R. See FLOCK, BOLLMAN, HESTER, and MANN, 119, xxxiii 121, 117
- Heymann, Karl. See LEVENE and HEYMAN, 102, 1
- Heymann, Walter. Metabolism and mode of action of vitamin D. II. Storage of vitamin D in different tissues *in vivo*, 118, 371
- Further studies on the absorption, excretion, and mode of action of vitamin D, 119, xlviii
- Metabolism and mode of action of vitamin D. IV. Importance of bile in the absorption and excretion of vitamin D, 122, 249
- V. Intestinal excretion of vitamin D, 122, 257
- van Heyningen, W. E. Preparation of deuterio fatty acids, 123, lv
- , Rittenberg, D., and Schoenheimer, Rudolf. The preparation of fatty acids containing deuterium, 125, 495
- Heyroth, Francis F. The action of alkali upon dibromoxyhydrouracil, 114, p. 1
- Hickman, K. C. D. See BILLS, MASSENGALE, HICKMAN, and GRAY, 123, x
- Highman, Walter J., Jr. Hyperparathyroidism in experimental renal insufficiency, 123, lvi
- Hilbert, Guido E., and Jansen, Eugene F. A study of the absorption spectra of some carotenoid pigments at liquid air temperatures and its applications to the carotenoid pigments of cow-pea leaves (*Vigna sinensis*), 106, 97
- and Rist, Carl E. Synthesis of 1-d-ribosidouracil. Inter-

- action of acetobromo-*d*-ribose and 2,4-diethoxypyrimidine, 117, 371
- Hildebrand, F. C. See CALDWELL and HILDEBRAND, 111, 411
- Hilditch, T. P., and Longenecker, H. E. Further determination and characterization of the component acids of butter fat, 122, 497
- Hilgetag, Guenter. See SCHOENHEIMER and HILGETAG, 105, 73
- Hill, Douglas W. See LEVENE and HILL, 101, 711
102, 563
- Hill, Edgar S., and Shaffer, Philip A. Semiquinones of anthraquinone sulfonates, 114, li
— See PREISLER, HILL, RONZONI, and YOUNG, 123, xcv
- Hill, Elsie. See KOEHLER, MARSH, and HILL, 119, lix
— See KOEHLER and HILL, 123, lxx
- Hill, Robert M. See DUBACH and HILL, 112, 313
— See LONGWELL and HILL, 112, 319
— See SCHULTZ and HILL, 123, cvi
- Hiller, Alma. See VAN SLYKE and HILLER, 102, 499
- Hilliard, J. See DEUEL, HALLMAN, MURRAY, and HILLIARD, 125, 79
- Himwich, Harold E. See GOLDFARB and HIMWICH, 101, 441
— See GOLDFARB, BARKER, and HIMWICH, 105, 283, 287
— See CHAMBERS, HIMWICH, and KENNARD, 108, 217
— Gildea, Edwin F., Rakieta, Nathan, and DuBois, Delafield. The effects of inhalation of carbon dioxide on the carbon dioxide capacity of arterial blood, 113, 383
— See BAKER, FAZEKAS, and HIMWICH, 125, 545
- Hinck, Claus F., Jr. See SOYENKOFF and HINCK, 109, 467
- Hinrichs, Marie A. See MCLEAN and HINRICHS, 109, lxiii
- Hinsie, L. E. See BLOCK, BRAND, HARRIS, and HINSIE, 114, xii
- Hirschfelder, Arthur D., and Serles, Earl R. A simple adaptation of Kolthoff's colorimetric method for the determination of magnesium in biological fluids, 104, 635
— Effect of renal insufficiency upon plasma magnesium and magnesium excretion after ingestion of magnesium sulfate, 104, 647
- Hirschmann, H. See WINTERSTEINER and HIRSCHMANN, 119, cvii
— and Wintersteiner, Oskar. The isolation of estrogenic diols from the urine of pregnant mares, 122, 303
- Hisey, Alan. See MORRISON and HISEY, 109, 233
114, lxxiii
117, 693

- . Oxygen uptake by dried hemoglobin, 119, xlix
- . The denaturation of dried hemoglobin by molecular oxygen, 123, lvi
- Hitchcock, David I. Calculation of isoelectric zones and isoelectric points, 114, 373
- Hixon, R. M. See CALDWELL and HIXON, 123, 595
- Hoagland, Charles L. See WEST, HOAGLAND, and CURTIS, 104, 627
- Hodge, Harold Carpenter. Gingival tissue lipids, 101, 55
- , Bale, William F., and LeFevre, Marian L. Molecular constitution of tooth and bone phosphates, 119, xlix
- and — . The molecular constitution of the calcium phosphates, 123, lvii
- Hodson, Adrian. See McCAY and MAYNARD, 109, 29
- . See MAYNARD, HODSON, ELLIS, and McCAY, 119, lxvi
- Hoehn, Willard M. See KENDALL, MASON, HOEHN, and McKENZIE, 119, lvi
- . See MASON, HOEHN, McKENZIE, and KENDALL, 120, 719
- . See KENDALL, MASON, HOEHN, and McKENZIE, 123, lxvii
- . See MASON, HOEHN, and KENDALL, 124, 459
- Hoffman, O. D. See KARR, AUSTIN, ABBOTT, and HOFFMAN, 119, lv
- , Abbott, W. O., Karr, Walter G., and Miller, T. G. The fate of glucose solutions introduced into the stomach of humans, 123, lvii
- Hoffman, Robert M., and Daniels, Farrington. The formation of vitamin D by cathode rays, 115, 119
- Hoffman, William S., and Cardon, Rose. The determination of inorganic sulfate in the serum of normal persons, 109, 717
- . A colorimetric method for the determination of serum magnesium based on the hydroxyquinoline precipitation, 118, 37
- . A photometric method for the determination of potassium in minute amounts of serum, 119, p. 1
- . A rapid photoelectric method for the determination of glucose in blood and urine, 120, 51
- . The photoelectric determination of potassium in minute quantities of serum, 120, 57
- and Osgood, Bess. A rapid photoelectric method for the microdetermination of sodium in biological fluids, 123, lviii
- and — . A photoelectric method for the microdetermination of sodium in serum and urine by the uranyl zinc acetate precipitation, 124, 347
- Hogan, Albert G., and Ritchie, Walter S. Nutritional properties of deaminized casein, 105, xxxix

Hogan, Albert G.—*continued*

— and —. An anemia caused by deaminized casein,

107, 179

— and Richardson, Luther R.

The identity of the antidermatitis factor,

109, xliii

— and Guerrant, Ralph E. Observations on the anemia caused by deaminized casein,

114, li

—, —, and Ritchie, Walter S. Additional observations on the anemia caused by deaminized casein,

115, 659

—, Richardson, Luther R., and Johnson, Paul E. A new deficiency disease associated with the vitamin B complex,

119, p. 1

Hogden, Corinne G. See ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN,

114, lxxxiv

— See ROBINSON, PRICE, and HOGDEN,

119, lxxxiii

— See PRICE, ROBINSON, and HOGDEN,

123, xevi

Hogness, T. R. See MILLER, ZSCHEILE, KOCH, HOGNESS, and KOCH,

109, lxv

—, Zscheile, F. P., Jr., Sidwell, A. E., Jr., and Barron, E. S. Guzman. Cyanide hemochromogen. The ferriheme hydroxide-cyanide reaction: its mechanism and equilibrium as determined by the spectrophotoelectric method,

118, 1

—, Sidwell, A. E., Jr., and Zscheile, F. P., Jr. The ab-

sorption spectra of compounds related to the sterols,

120, 239

— See SIDWELL, MUNCH, BARON, and HOGNESS,

123, 335

— See STOTZ, SIDWELL, and HOGNESS,

123, cxviii

124, 11

— See ALTSCHUL and HOGNESS,

124, 25

— See STOTZ, SIDWELL, and HOGNESS,

124, 733

— See STOTZ, ALTSCHUL, and HOGNESS,

124, 745

Holden, Raymond F., Jr. Determination of fermentable blood sugar by gasometric measurement of the carbon dioxide formed by the action of yeast,

119, 347

Holdridge, Curtis. See MCCLENDON, HAMILTON, and HOLDRIDGE,

105, lviii

Hollander, Franklin. Studies in gastric secretion. V. The composition of gastric juice as a function of its acidity,

104, 33

—, Bodecker, C. F., Saper, E., and Applebaum, E. Indications for organized variations in calcification in tooth enamel,

105, xl

— x-Ray absorption coefficients of dentin and enamel,

114, lii

— and Saltzman, Max. Characteristics of gastric secretion stimulated by pilocarpine,

123, lix

— Studies in gastric secretion. VI. A statistical analysis of

- the neutral chloride-hydrochloric acid relation in gastric juice, 125, 161
- Holm, George E. See KURTZ, JAMIESON, and HOLM, 106, 717
- Holmes, Arthur D., Pigott, Madeleine G., and Campbell, Percy A. The hemoglobin content of chicken blood, 103, 657
- , —, and —. The hemoglobin content of chicken blood. II. The decrease following hatching, 105, xli
- Holmes, Benjamin, and Kirk, Paul L. Comments on the microvolumetric sodium method of Ball and Sadusk, 116, 377
- Holmes, Frederic E. See GUEST and HOLMES, 110, 781
- Self-sealing vessels for storage of solutions used in the Van Slyke gasometric methods, 113, 411
- and Cullen, Glenn E. A method for the extraction of cholesterol from blood, 123, lx
- Holmes, Harry N., and Bromund, Werner H. Bixin solutions as colorimetric standards for the determination of carotene, 112, 437
- Holt, L. Emmett, Jr. See TIDWELL and HOLT, 112, 605
- See AYLWARD and HOLT, 121, 61
- Honeywell, Edna M., and Bills, Charles E. Cerevisterol: new notes on composition, properties, and relation to other sterols, 103, 515
- Hooker, Sanford B. See BOYD and HOOKER, 104, 329
- Hoover, Sam R. See BALLS and HOOVER, 121, 737
- Horning, E. See ROSE and EXTON, 109, lxxvi
- Hortenstine, J. C. See CHANUTIN, HORTENSTINE, COLE, and LUDEWIG, 123, 247
- , Chanutin, Alfred, and Ludwig, Stephan. Influence of yeast-containing diets on the total fatty acids and cholesterol content of the livers of intact and partially nephrectomized rats, 125, 455
- Horvitz, Herman J. See ROBERTS and HORVITZ, 123, cii
- Horvitz, Leonard. See BEARD and BOGGESE, 114, 771
- Horwitt, M. K. The titrimetric microestimation of iron in biological materials, 105, xli
- and Cowgill, George R. The effects of minute amounts of lead on the animal organism, 119, li
- and —. A titrimetric method for the quantitative estimation of lead in biological materials, 119, 553
- See BLOCK and HORWITT, 121, 99
- A simple glass electrode for the estimation of the pH of biological fluids under anaerobic conditions, 123, lx
- and Cowgill, George R.

- Further investigations of the absorption of minute amounts of lead from the diet, 123, lxi
- Hoskins, W. H. See PETERSON, HOSKINS, COFFMAN, and KOCH, 123, xciii
- Hotchkiss, H. T., Jr. See RENSHAW and HOTCHKISS, 103, 183
- Hotchkiss, Rollin D., and Goebel, Walther F. Derivatives of glucuronic acid. VII. The synthesis of aldobionic acids, 115, 285
- and —. Chemo-immunological studies on the soluble specific substance of pneumococcus. III. The structure of the aldobionic acid from the Type III polysaccharide, 121, 195
- Houchin, O. B. See GRAHAM, HOUCHIN, and TURNER, 120, 29
- See GRAHAM, PETERSON, HOUCHIN, and TURNER, 122, 275
- Howard, H. W. See SULLIVAN, HOWARD, and HESS, 119, 721
- Howe, Paul E. See SULLIVAN, HESS, HARDY, and HOWE, 109, xc
- Howell, Stacey F., and Sumner, James B. The specific effects of buffers upon urease activity, 104, 619
- See SUMNER and HOWELL, 108, 51
109, 429
113, 607
115, 583
- Howland, J. W., and Hawkins, W. B. Protein metabolism, protein interchange, and utilization in phlorhizinized dogs, 123, 99
- Hrubetz, M. Caroline, and Dotti, Louis B. Liver glycogen, with a note on the blood sugar level, 107, 731
- See DOTTI and HRUBETZ, 113, 141
- Hubbard, Roger S., Munford, Samuel A., and Tyner, James. The relationship between gastric secretion and the alkaline tide in urine, 101, 781
- and Brock, Henry J. Lactose in the plasma of pregnant and lactating women, 110, 411
- See CLINTON and HUBBARD, 119, 467
- and Russell, Nellie M. The fructose content of spinal fluid, 119, 647
- Hudson, C. S. See ROE and HUDSON, 112, 443
121, 37
- Huffman, C. F. See DUNCAN, HUFFMAN, and ROBINSON, 108, 35
- Huffman, Hugh M. See BOR-SOOK, HUFFMAN, and LIU, 102, 449
- See BOR-SOOK, ELLIS, and HUFFMAN, 117, 281
- Hughes, J. S. See CORRELL and HUGHES, 103, 511
- See ROEPKE and HUGHES, 108, 79
- Hughes, James. See SAIFER and HUGHES, 118, 241
121, 801
- Hughes, R. H., and Wimmer,

- E. J. The absorption of soluble, volatile fatty acids, 108, 141
- Hulpieu, H. R. See HARGER, HULPIEU, and LAMB, 119, xlv
120, 689
- Hummel, Frances Cope. See ERICKSON, WILLIAMS, HUMMEL, and MACY, 118, 15
- See ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY, 118, 569
- See WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY, 118, 599
- See HUNSCHER, HUMMEL, MACY, TODD, and FRANCIS, 119, lii
- Humoller, Fred L. See AUSTIN and HUMOLLER, 105, v
- Hunscher, Helen A. See ERICKSON, GULICK, HUNSCHER, and MACY, 106, 145
- , Hummel, Frances Cope, Macy, Icie G., Todd, T. Wingate, and Francis, C. C. Is skeletal maturity related to calcium storage in children? 119, lii
- Hunt, Madison. See DU VIGNEAUD and HUNT, 114, cv
115, 93
- and du Vigneaud, Vincent. The specificity of the β -alanine radical in relation to the depressor action of *l*-carnosine, 123, lxi
- and —. The preparation of *d*-alanyl-*l*-histidine and *l*-alanyl-*l*-histidine and an investigation of their effect on the blood pressure in comparison with *l*-carnosine, 124, 699
- See DU VIGNEAUD and HUNT, 125, 269
- Hurd, Loren C. See SCHWOEGLER, BABLER, and HURD, 113, 749
- I
- Imai, Takeo. See MCCLENDON, 102, 91
- Imboden, Miriam. See BILLS, IMBODEN, and WALLENMEYER, 105, x
- See COX and IMBODEN, 105, xviii
- See BILLS, McDONALD, MASSENGALE, IMBODEN, HALL, HERGERT, and WALLENMEYER, 109, vii
- Ingraham, Mary A. See BAUMANN, STEENBOCK, INGRAHAM, and FRED, 103, 339
- Inman, W. Robert. See YOUNG and INMAN, 123, cxxxi
124, 189
- Iob, Vivian, and Swanson, W. W. The extracellular and intracellular water in bone and cartilage, 122, 485
- and —. A study of fetal iron, 124, 263
- Irish, Oliver J. See DU VIGNEAUD and IRISH, 109, xciv
122, 349
- Irreverre, Filadelfo. See SULLIVAN, HESS, and IRREVERRE, 114, 633
- Irvin, J. Logan. Further studies on octopine, 123, lxii

Irving, George W., Jr. See DU VIGNEAUD, SIFFERD, and IRVING, 117, 589

— See DU VIGNEAUD, IRVING, DYER, and SEALOCK, 123, 45

— and du Vigneaud, Vincent.

The differential migration of the pressor and oxytocic hormones in electrophoretic studies of the untreated press-juice of the posterior lobe of the pituitary gland, 123, 485

Irving, Laurence, and Black, E. C. A convenient type of tonometer for the equilibration of blood, 118, 337

Irwin, Margaret House. See STEENBOCK, IRWIN, and WEBER, 114, c

Isler, Otto. See JACOBS and ISLER, 119, 155

Itter, Stuart, Orent, Elsa R., and McCollum, E. V. An effective method of extracting vitamin B, 108, 571

—, —, and —. A simplified method for preparing lacto-flavin and a study of its growth effect, 108, 579

—, —, and —. The possible rôle of the sulfhydryl group in vitamin B₂ deficiency, 108, 585

Ivy, A. C. See RONY, MORTIMER, and IVY, 102, 161

— See FREEMAN, KANT, and IVY, 112, 1

— See FREEMAN, CHEN, and IVY, 124, 79

J

Jackson, Arnold O., and Marvel, Carl S. 4-(or 5-)Hydroxymethyl-2-thiolimidazole, 103, 191

Jackson, Elizabeth B. See MORISON, McLEAN, and JACKSON, 122, 439

Jackson, Richard W. See GORDON and JACKSON, 110, 151

— See WHITE and JACKSON, 111, 507

— See GORDON, KAUFMAN, and JACKSON, 113, 125

— and Block, Richard J. Does bis(2-aminoethyl) disulfide (cystamine) promote growth in the rat limited to an inadequate intake of cystine and methionine? 113, 135

— and —. The metabolism of cystine and methionine. II. The availability of *d*- and *l*-methionine and their formyl derivatives in the promotion of growth, 122, 425

— See CAHILL and JACKSON, 123, xviii

— Kynurenic acid excretion by Carnivora, 123, lxiii

Jackson, Stanley M., and Gortner, Ross Aiken. A study of the proteins of the inactive and active mammary gland, 123, 719

Jacobi, Mendel. See KATZMAN and JACOBI, 118, 539

Jacobs, Walter A., and Bigelow, Newell M. Ouabain. II. The degradation of isouabain, 101, 15

- and —. Trianhydroperiplogenin, 101, 697
- and Elderfield, Robert C. Strophanthin. XXVIII. Further degradation of strophanthidin and periplogenin derivatives, 102, 237
- and Craig, Lyman C. The ergot alkaloids. II. The degradation of ergotinine with alkali. Lysergic acid, 104, 547
- and Simpson, James C. E. On sarsasapogenin and gitenin, 105, 501
- and Craig, Lyman C. The ergot alkaloids. III. On lysergic acid, 106, 393
- See ELDERFIELD and JACOBS, 107, 143
- and Elderfield, Robert C. The structure of the cardiac aglucones, 108, 497
- and Craig, Lyman C. The ergot alkaloids. IV. The cleavage of ergotinine with sodium and butyl alcohol, 108, 595
- and Elderfield, Robert C. Strophanthin. XXXII. The anhydrostrophanthidins, 108, 693
- See SIMPSON and JACOBS, 109, 573
- and Simpson, James C. E. The digitalis sapogenins, 110, 429
- and Craig, Lyman C. The ergot alkaloids. V. The hydrolysis of ergotinine, 110, 521
- See SIMPSON and JACOBS, 110, 565
- and Craig, Lyman C. The ergot alkaloids. VI. Lysergic acid, 111, 455
- and Elderfield, Robert C. Strophanthin. XXXIII. The oxidation of anhydroaglucone derivatives, 113, 611
- and —. XXXIV. Cyanhydrin syntheses with dihydrostrophanthidin and derivatives, 113, 625
- and Craig, Lyman C. The ergot alkaloids. VIII. The synthesis of 4-carboline carbonic acids, 113, 759
- and —. IX. The structure of lysergic acid, 113, 767
- and Elderfield, Robert C. The lactone group of the cardiac aglycones and Grignard reagent, 114, 597
- and Craig, Lyman C. The ergot alkaloids. XI. Isomeric dihydrolysergic acids and the structure of lysergic acid, 115, 227
- and —. The veratrine alkaloids. I. The degradation of cevine, 119, 141
- and Isler, Otto. The sapogenins of *Polygala senega*, 119, 155
- and Gould, R. Gordon, Jr. The ergot alkaloids. XII. The synthesis of substances related to lysergic acid, 120, 141
- and Craig, Lyman C. The veratrine alkaloids. II. Further study of the basic degradation products of cevine, 120, 447
- and —. The ergot alkaloids

Jacobs, Walter A.—*continued*

- XIII. The precursors of pyruvic and isobutyrylformic acids, 122, 419
 — and —. The veratrine alkaloids. III. Further studies on the degradation of cevine. The question of coniine, 124, 659
 —. See CRAIG, SHEDLOVSKY, GOULD, and JACOBS, 125, 289
 — and Craig, Lyman C. The veratrine alkaloids. IV. The degradation of cevine methiodide, 125, 625
 Jacobson, B. M. See SUBBAROW and JACOBSON, 114, cii
 Jaffe, Henry L. See BODANSKY and JAFFE, 105, xi
 109, x
 Jaleski, Thomas C. See UNDERHILL and JALESKI, 101, 11
 Jamieson, G. S. See KURTZ, JAMIESON, and HOLM, 106, 717
 Jansen, Eugene F. See HILBERT and JANSEN, 106, 97
 Janssen, Pearl. See PARSONS, JANSSEN, and SCHOENLEBER, 105, lxvii
 Jeans, P. C. See STEARNS and JEANS, 114, c
 Jeffreys, Cecil E. P. See BORSOOK and JEFFREYS, 110, 495
 —. See BORSOOK, DAVENPORT, JEFFREYS, and WARNER, 117, 237
 Jellinek, E. Morton. See LOONEY and JELLINEK, 109, lvii

Jensen, H., and Evans, E. A., Jr.

- Chemical studies on toad poisons. VI. Ch'an su, the dried venom of the Chinese toad, and the secretion of the tropical toad, *Bufo marinus*, 104, 307
 — and —. Studies on crystalline insulin. XVIII. The nature of the free amino groups in insulin and the isolation of phenylalanine and proline from crystalline insulin, 108, 1
 —. Chemical studies on toad poisons: *Bufo arenarum*, *Bufo regularis*, and *Xenopus laevis*, 109, xlv
 —, Evans, E. A., Jr., Pennington, W. D., and Schock, Ellen D. Further chemical investigation of crystalline insulin, 109, xlv
 —. See SCHOCK, JENSEN, and HELLERMAN, 111, 553
 —, Evans, E. A., Jr., Pennington, W. D., and Schock, Ellen D. The action of various reagents on insulin, 114, 199
 — and Chen, K. K. The chemical identity of certain basic constituents present in the secretions of various species of toads, 116, 87
 —. Chemical studies on toad poisons. Further contributions to the chemical constitution of marinobufagin, cinobufagin, and gamabufagin, 119, lii
 Jensen, Hans Behrnts. See ASTRUP and JENSEN, 124, 309

- Jewel, Paul W. See DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD, 101, 301
- Johlin, J. M., and Moreland, Ferrin B. Studies of the blood picture of the turtle after complete anoxia, 103, 107
- Johnson, Doris. See PARSONS, LEASE, and JOHNSON, 119, lxxvii
- . See PARSONS and JOHNSON, 123, xci
- Johnson, Erma O. See EVERETT, SHEPPARD, and JOHNSON, 104, 1
- Johnson, G. Hildegard. See JOHNSON, JOHNSON, and PETERSON, 116, 515
- Johnson, Martha. See HANKE and JOHNSON, 109, xl
- and Hanke, Martin E. The iron content and oxygen capacity of blood, 114, 157
- Johnson, Marvin J., Peterson, W. H., and Fred, E. B. Intermediary compounds in the acetone-butyl alcohol fermentation, 101, 145
- and — . The peptidase system of *Aspergillus parasiticus*, 112, 25
- , Johnson, G. Hildegard, and Peterson, W. H. The magnesium-activated leucyl peptidase of animal erepsin, 116, 515
- . See BERGER, JOHNSON, and PETERSON, 117, 429
- . Specificity of intestinal aminopolypeptidase, 122, 89
- . See BERGER and JOHNSON, 123, ix
- . See CHRISTENSEN, PETERSON, and JOHNSON, 123, xxi
- . See BERGER, JOHNSON, and PETERSON, 124, 395
- Johnson, Paul E. See HOGAN, RICHARDSON, and JOHNSON, 119, p. 1
- Johnson, R. E., and Edwards, H. T. Lactate and pyruvate in blood and urine after exercise, 118, 427
- , 119, liv
- Johnson, Ralph. See ROBINSON, 108, 403
- Johnson, Steven L. See HARGER, JOHNSON, and BRIDWELL, 123, p. 1
- Johnstin, Ruth, and Potter, Kathryn Sue. Galacturonic acid as a precursor of ascorbic acid, 110, 279
- Johnston, Charles G. See ANDREWS and JOHNSTON, 101, 635
- . See DE BEER, JOHNSTON, and WILSON, 108, 113
- . See ANDREWS, JOHNSTON, and ANDREWS, 109, iii
- . See SCHOENHEIMER and JOHNSTON, 120, 499
- Johnston, Margaret Woodwell, and Newburgh, L. H. A comparison of the dissipation of heat measured by the insensible loss of water with the heat production determined by indirect calorimetry for periods of twenty-four hours, 109, xlv
- and — . The storage of carbohydrate by the liver during undernutrition, 119, liv

- Johnston, S. M. See HAYMAN, JOHNSTON, and BENDER, 108, 675
- Jones, Chase Breese. See DU VIGNEAUD, DYER, JONES, and PATTERSON, 106, 401
- See DU VIGNEAUD, DYER, and JONES, 119, 47
- and du Vigneaud, Vincent. The synthesis of hexocystine and hexomethionine and a study of their physiological availability, 120, 11
- Jones, D. Breese, and Gersdorff, Charles E. F. Studies on digestibility of proteins *in vitro*. V. Rate of liberation of cystine on hydrolysis of casein. Some observations on colorimetric tests for cystine when applied to peptic and acid digests of casein, 101, 657
- and —. The effect of dilute alkali on the cystine content of casein, 104, 99
- and —. Some partial cleavage products obtained by peptic digestion of casein, 105, xlii
- See BLOCK, JONES, and GERSDORFF, 105, 667
- and Gersdorff, Charles E. F. Studies on digestibility of proteins *in vitro*. VI. Some partial cleavage products from peptic digests of casein, 106, 707
- and —. VII. Rate of liberation of cystine on tryptic digestion of casein, with observations on the stability of cystine in digestion mixtures at different pH values, 114, liii
- , —, and Phillips, Sammie. Proteins of the black bean of the Mayas, *Phaseolus vulgaris*, 122, 745
- and —. Decystinized casein, 123, lxiv
- Jones, Herman D. See WILKINS and JONES, 117, 481
- Jones, I. R. See HAAG and JONES, 110, 439
- Jones, James H. The influence of the removal of the parathyroid glands on the development of rickets in rats, 106, 701
- Further observations on the possible interrelationship in the physiological action of the parathyroid glands and vitamin D, 109, xlii
- , Andrews, Kathleen Crandall, and Andrews, James C. The substitution of certain cystine derivatives for cystine in the growth of rats, 109, xlvii
- Further observations on the possible interrelationship between the physiological actions of the parathyroid glands and vitamin D, 111, 155
- The comparative toxicity of irradiated ergosterol and parathyroid extract as determined on the dog and rat, 114, liv
- The relation of serum phosphate to parathyroid tetany, 114, liv
- The relation of serum phosphates to parathyroid tetany, 115, 371
- Jones, Maxwell. See STADIE and JONES, 123, cxiv
- Jones, Robert L. See ERICKSON,

- JONES, BERNSTEIN, WILLIAMS, LEE, and MACY, 114, xxxii
- See ERICKSON, WILLIAMS, BERNSTEIN, and JONES, 114, xxxii
- See BERNSTEIN, JONES, ERICKSON, WILLIAMS, AVRIN, and MACY, 122, 507
- See ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY, 122, 515
- Jones, W. A. See SURE and JONES, 119, xcvi
- Jorpes, Erik, and Bergström, Sune. Heparin: a mucoitin polysulfuric acid, 118, 447
- Joseph, Norman R. Activity coefficients in systems containing ions and zwitter ions, 105, xliii
- See GREENSTEIN and JOSEPH, 110, 619
- Interaction of amino acids and salts. I. Zinc chloride, 111, 479
- II. Sodium chloride and thalious chloride, 111, 489
- Interaction of gelatin and salts as measured by the electromotive force of cells without liquid junction, 114, lv
- Heterogeneous equilibrium of protein solutions. I. Activity coefficients and membrane equilibrium in mixtures of gelatin and salts, 116, 353
- and Stadie, William C. The simultaneous microdetermination of the total base and chloride of serum by electro-dialysis, 123, lxv
- and —. The simultaneous determination of total base and chloride on the same sample of serum by electro-dialysis, 125, 795
- Joslyn, M. A., Marsh, G. L., and Morgan, Agnes Fay. The relation of reducing value and extent of browning to the vitamin C content of orange juice exposed to air, 105, 17
- Judy, Frederick R. See WEST and JUDY, 123, cxxv
- Jukes, Thomas H. The fractionation of the amino acids of livetin, 103, 425
- and Schmidt, Carl L. A. The apparent dissociation constants of certain amino acids and related substances in water-ethanol mixtures, 105, 359
- The electrometric titration of lecithin and cephalin, 107, 783
- Measurement of tryptic digestion by direct titration, 109, xlvii
- and Schmidt, Carl L. A. The combination of certain fatty acids with lysine, arginine, and salmine, 110, 9
- See LEPKOVSKY and JUKES, 111, 119
- and Lepkovsky, Samuel. The distribution of the "filtrate factor" (a water-soluble vitamin belonging to the vitamin B complex and preventing a dietary dermatitis in chicks) in certain feedingstuffs, 114, 117
- See LEPKOVSKY and JUKES, 114, lx

Jukes, Thomas H.—*continued*

- See LEPKOVSKY, JUKES, and KRAUSE, 115, 557
- Further observations on the assay, distribution, and properties of the filtrate factor, 117, 11
- See FOUTS, LEPKOVSKY, HELMER, and JUKES, 119, xxxiv
- See LEPKOVSKY and JUKES, 119, lx
- and Babcock, Sidney H., Jr. The antiparalytic vitamin of the chick, 123, lxxv
- and —. Experiments with a factor promoting growth and preventing paralysis in chicks on a simplified diet, 125, 169

K

- Kamerling, S. E.** See CHOW and KAMERLING, 104, 69
- Kane, Edward A.** See HARTMAN, KANE, and SHINN, 105, xxxvi
- See MEIGS, TURNER, KANE, and SHINN, 105, lx
- See WISEMAN, KANE, and CARY, 105, ci
- and Shinn, Leo A. The decomposition of carotene during the storage of hays and meals, 109, xlviii
- See WISEMAN and KANE, 114, cviii
- See SHINN, KANE, WISEMAN, and CARY, 119, lxxxix
- Kant, E. R.** See FREEMAN, KANT, and IVY, 112, 1
- Kao, Hsueh-Chung, Conner, R. T., and Sherman, H. C.** The

availability of calcium from Chinese cabbage (*Brassica pekinensis*, Rupr.),

- 123, 221
- Kaplan, A.** See CHAIKOFF and KAPLAN, 106, 267
- and Chaikoff, I. L. Liver lipids in completely depancreatized dogs maintained with insulin, 108, 201
- See CHAIKOFF and KAPLAN, 112, 155
- and Chaikoff, I. L. The relation of glycogen, fat, and protein to water storage in the liver, 116, 663
- See CHAIKOFF and KAPLAN, 119, 423
- and Chaikoff, I. L. The effect of raw and autoclaved pancreas on the liver lipids of the completely depancreatized dog maintained with insulin, 119, 435
- and —. The effect of choline on the lipid metabolism of blood and liver in the completely depancreatized dog maintained with insulin, 120, 647
- See WEISS, KAPLAN, and LARSON, 125, 247
- Kaplan, Joseph.** See FERAUD, DUNN, and KAPLAN, 112, 323
- 114, 665
- Karjala, Sulo.** See NIEMANN, KARJALA, and LINK, 104, 189
- Karnofsky, D.** See ADDIS, KARNOFSKY, LEW, and POO, 124, 33

- Karr, Walter G.** See CAJORI and KARR, 109, xiv
- , Austin, J. Harold, Abbott, W. O., and Hoffman, O. D. The rate at which glucose enters the duodenum from the stomach, 119, lv
- See HOFFMAN, ABBOTT, KARR, and MILLER, 123, lvii
- Kass, J. P., Miller, E. S., and Burr, George O.** A spectroscopic study of isomerism in the fatty acids, 123, lxvi
- Kassell, Beatrice.** The determination of cystine and related disulfides with the Pulfrich photometer, 109, xlix
- Some observations on the determination of cystine and methionine in proteins, 119, lvi
- See BRAND, BLOCK, KASSELL, and CAHILL, 119, 669
- The metabolism of reduced lactalbumin in cystinuria, 123, lxvi
- and Brand, Erwin. The photometric determination of cystine, cysteine, ascorbic acid, and related compounds with phosphotungstic acid, 125, 115
- and —. The rate of reaction of sulphydryl and disulfide compounds with phosphotungstic acid and with sulfite, 125, 131
- and —. The determination of methionine, cysteine, and sulfate in proteins after hydrolysis with hydriodic acid, 125, 145
- See BRAND, CAHILL, and KASSELL, 125, 415
- , Cahill, George F., and Brand, Erwin. Cystinuria. IX. The metabolism of lactalbumin and of reduced lactalbumin, 125, 423
- and Brand, Erwin. The distribution of the sulfur in casein, lactalbumin, edestin, and papain, 125, 435
- Katzman, Ellis, and Jacobi, Mendel.** The determination of serum calcium by titration with ceric sulfate, 118, 539
- Katzman, Philip A., and Doisy, Edward A.** The quantitative determination of small amounts of gonadotropic substance, 105, xlv
- and —. The quantitative determination of small amounts of gonadotropic material, 106, 125
- and —. A note on the preparation of gonadotropic extracts of urine of pregnancy by tungstic acid precipitation, 107, 513
- , Wade, Nelson J., and Doisy, Edward A. Concerning the production of anterior pituitary inhibitory substances, 114, lvi
- Kaucher, Mildred.** See WANG, KAUCHER, and WING, 109, xcv
- Kaufman, Robert E.** See GORDON, KAUFMAN, and JACKSON, 113, 125
- Keenan, J. A., Kline, O. L., Elvehjem, C. A., Hart, E. B., and Halpin, J. G.** New nutri-

Keenan, J. A.—*continued*

- tional factors required by the chick, 103, 671
- and —. Studies on the stability of vitamins B₁, B₂, and B₄, 105, xlv
- See KLINE, ELVEHJEM, KEENAN, and HART, 107, 107
- Keil, H. L., and Nelson, Victor E.** The rôle of copper in carbohydrate metabolism, 106, 343
- Keith, Norman M.** See POWER and KEITH, 114, lxxx
- Kelley, Edward G., and Miller, Edgar G., Jr.** Reactions of dyes with cell substances. I. staining of isolated nuclear substances, 110, 113
- and —. II. The differential staining of nucleoprotein and mucin by thionine and similar dyes, 110, 119
- . Reactions of dyes with cell substances. III. An apparatus for the definition of color in stained histological sections, 110, 141
- Kelly, Eunice.** See LEASE, KELLY, and PARSONS, 114, lxi
- See PARSONS, 116, 685
- Kemmerer, A. R., and Steenbock, H.** A study of the sparing action of fats on the vitamin B content of animal tissues, 103, 353
- Kemmerer, Kenneth S.** See ROSE, KEMMERER, WOMACK, MERTZ, GUNTHER, MCCOY, and MEYER, 114, lxxxv

- See WOMACK, KEMMERER, and ROSE, 121, 403
- Kempner, Walter.** Inhibitory effect of low oxygen tension on the deamination of amino acids in the kidney, 124, 229
- Kendall, Edward C., Mason, Harold L., McKenzie, Bernard F., Myers, Charles S., and Koelsche, G. A.** The chemical nature and physiological action of the hormone of the suprarenal cortex, 105, xlv
- , —, —, and —. The chemical nature of cortin, 109, p. 1
- , —, Myers, Charles S., and Allers, W. D. A physiologic and chemical investigation of the suprarenal cortex, 114, lvii
- See MASON, MYERS, and KENDALL, 114, 613
- 116, 267
- , Mason, Harold L., Hoehn, Willard M., and McKenzie, Bernard F. Further investigation of the suprarenal cortex, 119, lvi
- See MASON, HOEHN, MCKENZIE, and KENDALL, 120, 719
- , Mason, Harold L., Hoehn, Willard M., and McKenzie, Bernard F. The chemical nature and physiological activity of cortin and crystalline cortin-like compounds, 123, lxvii
- See MASON, HOEHN, and KENDALL, 124, 459

- See FLOCK, BOLLMAN, MANN, and KENDALL, 125, 57
- Kendall, Forrest E. See HEIDELBERGER and KENDALL, 105, xxxvii
- See GOETTSCH and KENDALL, 109, 221
- See CALVERY, HEIDELBERGER, and KENDALL, 109, xv
- , Heidelberg, Michael, and Dawson, Martin H. A serologically inactive polysaccharide elaborated by mucoid strains of Group A hemolytic streptococcus, 118, 61
- Kendrick, A. B., and Hanke, Martin E. A modification of Van Slyke's manometric amino nitrogen method yielding theoretical values with cystine and glycine, 114, lviii
- and —. The use of iodine and other modifications in the Van Slyke manometric amino nitrogen method, 117, 161
- Kennard, Margaret A. See CHAMBERS, HIMWICH, and KENNARD, 108, 217
- Kerly, Margaret, and Ronzoni, Ethel. The effect of pH on carbohydrate changes in isolated anaerobic frog muscle, 103, 161
- See RONZONI and KERLY, 103, 175
- Kern, Franklin M. See SMELO, KERN, and DRABKIN, 125, 461
- Kerr, Stanley E., and Daoud, Lateefeh. A study of the organic acid-soluble phosphorus of the erythrocytes of various vertebrates, 109, 301
- Studies on the phosphorus compounds of brain. I. Phosphocreatine, 110, 625
- See AVERY, KERR, and GHANTUS, 110, 637
- The carbohydrate metabolism of brain. I. The determination of glycogen in nerve tissue, 116, 1
- and Ghantus, Musa. The carbohydrate metabolism of brain. II. The effect of varying the carbohydrate and insulin supply on the glycogen, free sugar, and lactic acid in mammalian brain, 116, 9
- and —. III. On the origin of lactic acid, 117, 217
- Studies on the inorganic composition of blood. IV. The relationship of potassium to the acid-soluble phosphorus fractions, 117, 227
- , Hampel, C. W., and Ghantus, Musa. The carbohydrate metabolism of brain. IV. Brain glycogen, free sugar, and lactic acid as affected by insulin in normal and adrenal-inactivated cats, and by epinephrine in normal rabbits, 119, 405
- and Antaki, Albert. On the nature of the organic phosphorus of blood hydrolyzed by the phosphatases of bone, kidney, and blood, 121, 531
- and —. The carbohydrate metabolism of brain. V. The

Kerr, Stanley E.—*continued*

- effect of certain narcotics and convulsant drugs upon the carbohydrate and phosphocreatine content of rabbit brain, 122, 49
- . Note on the phosphorus content of rat brain in experimental rickets, 122, 53
- . The carbohydrate metabolism of brain. VI. Isolation of glycogen, 123, 443
- Kertesz, Dennis.** See SENDROY, DILLON, and VAN SLYKE, 105, 597
- Kertesz, Z. I.** Glucoreductone for the standardization of 2,6-dichlorophenol indophenol solutions used for the estimation of ascorbic acid (vitamin C), 104, 483
- . The determination of glucuronic and galacturonic acids by Bertrand's method, 108, 127
- , Dearborn, R. B., and Mack, G. L. Vitamin C in vegetables. IV. Ascorbic acid oxidase, 116, 717
- . Pectic enzymes. I. The determination of pectin-methoxylase activity, 121, 589
- Kesten, H. D.** See MEEKER and KESTEN, 113, 289
- Keston, Albert S., Rittenberg, D., and Schoenheimer, Rudolf.** Determination of deuterium in organic compounds, 122, 227
- and — . The stability of hydrogen and deuterium in amino acids, 123, lxviii

- . See FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER, 124, 159
- . See RITTENBERG, KESTON, SCHOENHEIMER, and FOSTER, 125, 1
- Keys, Ancel.** The recovery following brief severe exercise, 105, xlvi
- and Taylor, Henry L. The determination of the colloidal osmotic pressure in blood serum and similar fluids, 109, 47
- and — . The behavior of the plasma colloids in recovery from brief severe work and the question as to the permeability of the capillaries to proteins, 109, 55
- . The determination of total base in blood and other biological fluids by the electro-dialysis method of Adair and Keys, 114, 449
- . The microdetermination of chlorides in biological materials. Presentation of a method and an analysis of its use, 119, 389
- and Butt, Hugh R. Filtration processes in the extremities resulting from quiet standing, 123, lxviii
- Kharasch, M. S., Legault, R. R., Wilder, A. B., and Gerard, R. W.** Metal catalysts in biologic oxidations. I. The simple system: thioglycolic acid, buffer, metal, dithiol, 113, 537
- , — , — , and — . II. Tissue inhibitors, 113, 557

- Khorazo, Devorah.** See MEYER, THOMPSON, PALMER, and KHORAZO, 113, 303
 —. See MEYER, PALMER, THOMPSON, and KHORAZO, 113, 479
- Kibrick, Andre C.** See BLAU, 110, 351
- Kik, M. C.** See SMITH and KIK, 103, 391
 —. See SURE, KIK, and CHURCH, 103, 417
 —. See SURE, KIK, and BUCHANAN, 108, 11, 19, 27
 —. The nutritive value of lactalbumin, 119, lvii
- Kilpatrick, Martin.** See SHINHARA and KILPATRICK, 105, 241
- Kimmel, Louise.** See MORGAN, KIMMEL, THOMAS, and SAMISCH, 106, 531
 —. See MORGAN, KIMMEL, and HAWKINS, 119, lxx 120, 85
- Kinard, Frederick W., and Chanutin, Alfred.** Studies on the phosphatase content of the whole rat and of the vasoligated kidney, 103, 461
- King, C. G.** See BESSEY and KING, 103, 687
 —. See YAVORSKY, ALMADEN, and KING, 106, 525
 —. See WEBER and KING, 108, 131
 —. See BESSEY, KING, QUINN, and SHERMAN, 111, 115
 —. See MUSULIN, WOODWARD, SILVERBLATT, and KING, 114, lxxiv
 —. See MUSULIN and KING, 116, 409
- . See SIGAL and KING, 116, 489
 —. See LYMAN, SCHULTZE, and KING, 118, 757
 —. See STOTZ, HARRER, and KING, 119, xcv, 511
 —. See STOTZ, HARRER, SCHULTZE, and KING, 120, 129
 —. See SCHULTZE, STOTZ, and KING, 122, 395
 —. See STOTZ, HARRER, SCHULTZE, and KING, 122, 407
- King, H. H.** See SHENK, HALL, and KING, 105, 741
 —. See KLEIN, HALL, and KING, 105, 753
- Kinsey, V. Everett.** The effect of x-rays on glutathione, 110, 551
- Kirby, G. W., and Atkin, Lawrence.** A convenient method for the preparation of galac yeast, 116, 511
- Kirk, Esben.** See VAN SLYKE, PAGE, and KIRK, 102, 635
 —. See VAN SLYKE and KIRK, 102, 651
 —. The existence of a urea precursor depot in kidney tissue, 102, 683
 —. Gasometric microdetermination of phosphoric acid, 105, xlvii
 —, Page, Irvine H., and Van Slyke, Donald D. Gasometric determination of plasma lipids, 105, xlvii
 —. Gasometric microdetermination of phosphoric acid, 106, 191

Kirk, Esben—*continued*

- , Page, Irvine H., and Van Slyke, Donald D. Gasometric microdetermination of lipids in plasma, blood cells, and tissues, 106, 203
- See PAGE, KIRK, LEWIS, THOMPSON, and VAN SLYKE, 111, 613
- , Lewis, William H., Jr., and Thompson, William R. The effect of age on the plasma calcium content of men, 111, 641
- A study on Kimmelstiel's procedure for titrimetric cerebroside determination, with description of an improved technique, 123, 613
- A micromethod for approximate estimation of lecithin, cephalin, ether-insoluble phosphatide, and cerebrosides in plasma, red blood cells, and tissues, 123, 623
- The concentration of lecithin, cephalin, ether-insoluble phosphatide, and cerebrosides in plasma and red blood cells of normal adults, 123, 637
- Kirk, Paul L.** See HOLMES and KIRK, 116, 377
- Kirsh, David.** Factors influencing the activity of fungus lipase, 108, 421
- Kissin, Milton.** See DEMEIO, KISSIN, and BARRON, 107, 579
- Klaas, Rosalind.** See FRIEDEMANN and KLAAS, 109, xxxiv
115, 47

- Kleiber, Max.** Contribution to the method of gas analysis for respiration trials, 101, 583
- See GOSS and KLEIBER, 119, xxxviii
- Klein, Dorothea E., Hall, J. Lowe, and King, H. H.** Spectrophotometric characteristics of hemoglobins. II. Hemoglobin of fowls, 105, 753
- Klein, J. R., and Harris, J. S.** The acetylation of sulfanilamide *in vitro*, 124, 613
- Kleiner, Israel S., and Halpern, Rebecca.** Fluctuations of the blood sugar *in vitro*, 101, 535
- See TAUBER and KLEINER, 104, 259
- and Tauber, Henry. Studies on trypsin. I. The chemical nature of trypsin, 104, 267
- See TAUBER and KLEINER, 104, 271
105, 411, xc, xci, 679
- and Tauber, Henry. Further studies on the zymogens of pepsin and rennin, 106, 501
- See TAUBER and KLEINER, 108, 563
- See TAUBER, KLEINER, and MISHKIND, 110, 211
- See TAUBER and KLEINER, 110, 559
- Klemme, Dorothea E.** See POE and KLEMMER, 109, 43
- Klemperer, Friedrich W.** See BARRON, DEMEIO, and KLEMPERER, 112, 625
- See BARRON, BARRON, and KLEMPERER, 116, 563

- , Trimble, Harry C., and Hastings, A. Baird. The uricase of dogs, including the Dalmatian, 125, 445
- See GREENSTEIN, KLEMPERER, and WYMAN, 125, 515
- Klenk, E. Cerebronic acid. A reply to the paper of Levene and Yang, 105, 467
- and Ditt, F. The oxidation of *dl*- α -hydroxystearic acid and its significance as regards the structure of cerebronic acid. A reply to the paper of Levene and Yang, 111, 749
- Kline, B. E. See ELVEHJEM and KLINE, 103, 733
- Kline, O. L. See KEENAN, KLINE, ELVEHJEM, HART, and HALPIN, 103, 671
- See KEENAN and KLINE, 105, xlv
- , Elvehjem, C. A., Keenan, J. A., and Hart, E. B. Studies on the growth factor in liver, 107, 107
- See ARNOLD, KLINE, ELVEHJEM, and HART, 116, 699
- , Tolle, Chester D., and Nelson, E. M. Polyneuritis as a criterion in vitamin B₁ determinations, 123, lxix
- Klingler, Charlotte. See ANSLOW, FOSTER, and KLINGLER, 103, 81
- Klose, A. A., Stokstad, E. L. R., and Almquist, H. J. The essential nature of arginine in the diet of the chick, 123, 691
- , Almquist, H. J., and Mecchi, E. Properties of the antihemorrhagic vitamin (vitamin K), 125, 681
- Klumpp, Theodore G. The determination of iron in biological materials, 107, 213
- Knott, Elizabeth M., and Schlutz, Frederic W. The use of a ten day period for biological assay of vitamin B₁, 114, lix
- and —. Improvement and standardization of rat growth technique for short period assays of vitamin B, 119, lviii
- Knott, Leslie. See DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT, 117, 119
- See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN, 123, 257
- See DEUEL, HALLMAN, MURRAY, and HILLIARD, 125, 79
- Knudson, Arthur, and Benford, Frank. Quantitative studies of the effectiveness of ultraviolet radiation of various wave-lengths in rickets, 105, xlviii
- , Sturges, Stuart, and Bryan, W. Ray. Cholesterol content of skin, blood, and tumor tissue in rats irradiated with ultraviolet light, 123, lxx
- and Benford, Frank. Quantitative studies of the effectiveness of ultraviolet radiation of various wave-lengths in rickets, 124, 287
- Koch, Elizabeth M. See MILLER, ZSCHEILE, KOCH, HOGNESS, and KOCH, 109, lxx

Koch, Elizabeth M.—*continued*

— and **Koch, F. C.** Provitamin D potency of some sterol derivatives, 116, 757

Koch, F. C. See **GALLAGHER** and **Koch**, 104, 611
105, xxx

— and **Gallagher, T. F.** The effect of light on the comb response of capons to testicular hormone, 105, xlix

— See **HATHAWAY** and **Koch**, 108, 773

— See **MILLER, ZSCHEILE, Koch, HOGNESS, and Koch**, 109, lxxv

— See **WILLIER, GALLAGHER, and Koch**, 109, xcix

— See **BATES** and **Koch**, 111, 197

— See **GALLAGHER** and **Koch**, 114, xxxix

— See **Koch** and **Koch**, 116, 757

— See **PETERSON, GALLAGHER, and Koch**, 119, 185

— See **DUNCAN, GALLAGHER, and Koch**, 119, xxvii

— See **PETERSON, GALLAGHER, and Koch**, 119, lxxvii

— See **PETERSON, HOSKINS, COFFMAN, and Koch**, 123, xciii

Kochakian, Charles D., MacLachlan, P. L., and McEwen, H. Douglas. Do androgens affect the blood lipids? 122, 433

Köck-Molnar, Klara. See **RAPAPORT** and **KÖCK-MOLNAR**, 104, 29

Koehler, Alfred E. The destruction of epinephrine by tissues and fluids of the body, 105, p. 1

— The epinephrine content of suprarenal glands surgically removed in the treatment of essential hypertension, 114, lix

— See **VOLLMAR** and **KOEHLER**, 114, cvi

—, **Marsh, Norman, and Hill, Elsie.** The effect of epinephrine injected intravenously at a constant rate in normal and hypertensive cases, 119, lix

— and **Hill, Elsie.** Comparison of the oral and intravenous glucose tolerance, 123, lxx

Koehn, C. J., Jr. See **ELVEHJEM** and **KOEHN**, 108, 709

— See **ELVEHJEM, KOEHN, and OLESON**, 114, xxxi
115, 707

— and **Elvehjem, C. A.** Further studies on the concentration of the antipellagra factor, 118, 693

Koelsche, G. A. See **KENDALL, MASON, MCKENZIE, MYERS, and KOELSCH**, 105, xlv

Koepfli, J. B., Thimann, Kenneth V., and Went, F. W. Phytohormones: structure and physiological activity. I, 122, 763

Kohler, G. O., Elvehjem, C. A., and Hart, E. B. Modifications of the bipyridine method for available iron, 113, 49

- Kohn, Henry I.** Coenzyme stability in *Hemophilus parainfluenzæ*, 123, lxxi
- Kohn, R., and Watrous, R. M.** Inhibition of the benzidine blood test by ascorbic acid, 124, 163
- Komarov, S. A.** Isolation of mucoitinsulfuric acid from canine gastric juice, 109, 177
- Kondritzer, Albert A.** See PERLZWEIG, KONDRITZER, and BRUCH, 123, xcii
- Koppenhoefer, Robert Mack.** The distribution of lipids in fresh steer skin, 116, 321
- Kornblum, Morris.** See SAIFER and KORNBLUM, 112, 117 114, 551
- Krahl, M. E.** See CLOWES and KRAHL, 109, xxi
- and Clowes, G. H. A. Some effects of dinitrocresol on oxidation and fermentation, 111, 355
- See CLOWES and KRAHL, 114, xix
- and Clowes, G. H. A. The significance of carbon dioxide tension for metabolic stimulation by substituted phenols, 119, lx
- See CLOWES, DAVIS, and KRAHL, 123, xxii
- The acidic dissociation of substituted phenols in relation to the mechanism of their physiological action, 123, lxxii
- Kramer, Alice W.** See CORLEY, KRAMER, and WOLF, 109, xxiii
- Kramer, Benjamin.** See NATELSON, SOBEL, and KRAMER, 105, 761
- See SOBEL, GOLDFARB, and KRAMER, 108, 395
- See SOBEL, PEARL, and KRAMER, 114, xcvi
- See SOBEL, PEARL, GERCHICK, and KRAMER, 118, 47
- Krantz, John C., Jr.** See CARR, MUSSER, SCHMIDT, and KRANTZ, 102, 721
- See CARR and KRANTZ, 107, 371
- See CARR, FORMAN, and KRANTZ, 123, xviii
- See CARR and KRANTZ, 124, 221
- Krause, Myrtise E.** See LEFKOVSKY, JUKES, and KRAUSE, 115, 557
- Kraus-Ragins, Ida.** The action of arginase on natural proteins and derived proteins obtained therefrom by trypsin and pepsin, 123, 761
- Krauss, W. E.** See SUTTON, SETTERFIELD, and KRAUSS, 105, lxxxix
- and Washburn, R. G. The iron and copper content of milk throughout the season, as related to anemia development in rats, 114, 247
- Kraybill, Henry R.** See SHREWSBURY and KRAYBILL, 101, 701
- Kreider, Leonard C.** See LEVENE and KREIDER, 120, 591, 597 121, 155

Kreider, Leonard C.—*continued*

- See LEVENE, TIPSON, and KREIDER, 122, 199
- Kremers, Roland E.** See SELL and KREMERS, 125, 451
- Krummel, Guy S.** See WEST, KRUMMEL, and CARTER, 122, 605
- Kruse, H. D., Schmidt, Marguerite M., and McCollum, E. V.** Studies on magnesium deficiency in animals. V. Changes in the mineral metabolism of animals following magnesium deprivation, 106, 553
 - See ORENT, KRUSE, and MCCOLLUM, 106, 573
 - See DAY, KRUSE, and MCCOLLUM, 112, 337
- Krznarich, Paul W.** See ANDERSON and KRZNARICH, 111, 549
 - See ANDERSON, SEIGLE, KRZNARICH, RICHARDS, and MARTENY, 121, 165
- Kuchel, C. C.** See BROCKLESBY and KUCHEL, 123, xvi
- Kugel, Victor H.** See VAN SLYKE and KUGEL, 102, 51, 489
- Kuizenga, Marvin H.** See CARTLAND and KUIZENGA, 116, 57
- Kulchar, George V.** See PILLSBURY and KULCHAR, 106, 351
- Kuna, Martin.** See LEVENE, 110, 323
 - See LEVENE and ROTHEN, 111, 739
 - See LEVENE, 113, 153
 - See LEVENE, ROTHEN, and MARKER, 115, 253
 - See LEVENE and MARKER, 115, 267
 - See LEVENE, 115, 275
 - See LEVENE, ROTHEN, and MEYER, 115, 401
 - See LEVENE and ROTHEN, 115, 415
 - and Levene, P. A. Configurational relationship of mandelic acid to lactic acid, 118, 315
 - See BARTLETT, KUNA, and LEVENE, 118, 503, 513
 - See LEVENE and ROTHEN, 119, 189
 - See LEVENE, ROTHEN, and KUNA, 120, 759, 777, 121, 747
 - See LEVENE and KUNA, 122, 291
 - See LEVENE, MEYER, and KUNA, 125, 703
- Kurtz, Alton C., and Luck, James Murray.** Studies on annelid muscle. I. Taurine in *Audouinia spirabranthus*, Moore, 111, 577
 - A simple synthesis of *dl*-citrulline, 122, 477
- Kurtz, Floyd E., Jamieson, G. S., and Holm, George E.** The lipids of milk. I. The fatty acids of the lecithin-cephalin fraction, 106, 717
- Kurzrok, Raphael.** See COCKRILL, MILLER, and KURZROK, 105, xvi
- Kuyper, Adrian C., and Mattill, H. A.** Some aspects of citric acid metabolism, 103, 51

- The quantitative precipitation of citric acid, 123, 405
- The buffer action of unidentified urine constituents, 123, 409
- Kydd, David M. Bence-Jones protein in serum, 107, 747
- Kyer, Jean L., and Bethell, Frank H. The vitamin B complex and nutritional anemia in the white rat, 109, p. 1
- and —. The requirement of iron and copper and the influence of diet upon hemoglobin formation during normal pregnancy, 114, lx

L

- Lackman, David B. See SEVAG, LACKMAN, and SMOLENS, 124, 425
- Lamb, Alvin R. The effect of malnutrition on the pathogenesis of rat leprosy, 109, li
- Lamb, E. B. See HARGER, HULPIEU, and LAMB, 119, xlv
120, 689
- Lamson, Paul D. See ROBBINS and LAMSON, 106, 725
- Landauer, Walter, Upham, Elizabeth, and Rubin, Fay. Studies on the creeper fowl. VIII. The effect of bone extract on skeletal growth and the phosphatase content of the bones, 108, 121
- Landis, E. M. See WESTFALL and LANDIS, 116, 727
- Landow, H. See DRABKIN, WIDERMAN, and LANDOW, 109, xxvii

- Lane, Ruth A. See WEST, LANE, and CURTIS, 109, xcvi
- Lanford, Caroline Sherman, and Sherman, H. C. Further studies of the calcium content of the body as influenced by that of the food, 123, lxxiii
- Langley, Wilson D., and Albrecht, Audra J. The identification of the flavianates of various organic bases, 108, 729
- See EDWARDS and LANGLEY, 112, 469
- and Evans, Margaret. The determination of creatinine with sodium 3,5-dinitrobenzoate, 115, 333
- Langston, William C. See DAY, LANGSTON, and SHUKERS, 114, xxv
- Lantz, Edith M. See SMITH and LANTZ, 101, 677
112, 303
- Larson, Clarence E. See GREENBERG and LARSON, 109, 105
115, 769
119, xxxix
- and Greenberg, David M. The analysis of calcium in blood and other biological material by titration with ceric sulfate, 123, 199
- See WEISS, KAPLAN, and LARSON, 125, 247
- Larson, Hardy W. Comparison of the xylose tolerance with blood urea in nephritic rats, 109, lii
- See BLATHERWICK, BRADSHAW, EWING, LARSON, and SAWYER, 111, 537

Larson, Hardy W.—*continued*

- See BLATHERWICK, BRADSHAW, CULLIMORE, EWING, LARSON, and SAWYER,

113, 405

- , Blatherwick, N. R., Bradshaw, Phoebe J., Ewing, Mary E., and Sawyer, Susan D. The metabolism of *d*-xylulose,

117, 719

- , —, —, —, and Sawyer, Susan D. The metabolism of *l*-xylulose,

123, lxxiii

- Larson, P. S., and Chaikoff, I. L. The effect of insulin on the excretion of allantoin by the normal dog,

108, 457

- See CHAIKOFF and LARSON,

109, 85

- See CHAIKOFF, LARSON, and READ,

109, 395

- and Brewer, George. The relation of the adrenal medulla to the effect of insulin on purine metabolism,

115, 279

- Lasker, Margaret, and Enklewitz, Morris. A simple method for the detection and estimation of *l*-xyloketose in urine,

101, 289

- See ENKLEWITZ and LASKER,

110, 443

- Lassek, Arthur M. See REMINGTON and LASSEK,

119, lxxxii

- Lauffer, Max A., and Stanley, W. M. Stream double refraction of virus proteins,

123, 507

- Laug, Edwin P. A reinvestigation of the phenomenon of a first acid change in whole blood,

106, 161

- and Nash, Thomas P., Jr. Some observations on the nature of the reducing substances in normal dog urine,

108, 479

- Laughton, Nelles B., and Macallum, A. Bruce. Note on the insular hormone,

109, lii

- Lauson, Henry. See SEVRINGHAUS, HELLER, LAUSON, and GOLDEN,

123, cvii

- Lavietes, Paul H. Anaerobic ultrafiltration,

120, 267

- Lavin, G. I., and Stanley, W. M. The ultraviolet absorption spectrum of crystalline tobacco mosaic virus protein,

118, 269

- , Thompson, Robert H. S., and Dubos, René J. The ultraviolet absorption spectra of fractions isolated from pneumococci,

125, 75

- Lavine, Theodore F., and Toennies, Gerrit. The oxidation of cystine in non-aqueous media. II. Studies on the hydration of acetonitrile and acetic anhydride by a non-aqueous titration method,

101, 727

- See TOENNIES and LAVINE,

105, 107, 115

- The iodometric determination of cysteine,

109, 141

- and Toennies, Gerrit. A disulfoxide of *l*-cystine,

109, liii

- See TOENNIES, LAVINE, and BENNETT,

112, 493

- See TOENNIES and LAVINE,

113, 571

- The oxidation of cystine in non-aqueous media. VI. A study of the reactions of the disulfoxide of *l*-cystine, especially of its dismutative decompositions, 113, 583
- The action of mercuric sulfate and chloride on cysteine, cystine, cysteine sulfinic acid ($R-SO_2H$), and cysteic acid with reference to the dismutation of cystine, 117, 309
- Some observations on the oxidation of cysteine and its intermediate oxidation products in aqueous solution, 123, lxxiv
- Lease, Jane G., and Parsons, Helen T. The extraction of the factor curative of dermatitis in rats due to egg white, 105, p. 1
- , Kelly, Eunice, and Parsons, Helen T. Effects on three types of animals of injecting the new factor curative of pellagra-like symptoms due to egg white, 114, lxi
- See PARSONS, LEASE, and JOHNSON, 119, lxxvii
- Leavenworth, Charles S. See VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH, 119, 369
- See VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN, 125, 527
- LeClerc, J. A. See DAVIDSON and LeCLERC, 108, 337
- Lee, Milton. See SCHAFFER and LEE, 108, 355
- See AYRES and LEE, 115, 139
- Lee, Pearl. See ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY, 109, xxx
- See ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY, 114, xxxii
- See ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY, 118, 569
- See ERICKSON, LEE, and WILLIAMS, 123, xxxiv
- Lee, Wei Yung. See CARRUTHERS and LEE, 108, 525
- Lee, William C., and Lewis, Howard B. The effect of fasting, refeeding, and of variations in the cystine content of the diet on the composition of the tissue proteins of the white rat, 107, 649
- See THOMSON and LEE, 118, 711
- LeFevre, Marian L. See HODGE, BALE, and LEFEVRE, 119, xlix
- See HAVEN, BALE, and LEFEVRE, 123, lii
- Legault, R. R. See KHARASCH, LEGAULT, WILDER, and GERARD, 113, 537, 557
- Lehman, W., and Scott, F. H. Note on the total protein content of plasma and serum, 111, 43
- Leighty, John A. See CORLEY and LEIGHTY, 114, xxii
- and Corley, Ralph C. Amino acid catabolism. IV. The fate of certain synthetic α -amino acids administered by subcutaneous injection to the normal dog, 120, 331

- Leland, Jessica P. See FOSTER, PALMER, and LELAND, 115, 467
- . See PALMER, LELAND, and GUTMAN, 125, 615
- Leopold, Jerome S. See DREKTER, BERNHARD, and LEOPOLD, 110, 541
- Lepkovsky, Samuel. See EVANS and LEPKOVSKY, 105, xxvii
- . See EVANS, LEPKOVSKY, and MURPHY, 106, 431, 441, 445
107, 429, 439, 443
- , Popper, William, Jr., and Evans, Herbert M. The concentration of vitamin G by adsorption and elution from fullers' earth, 108, 257
- , Ouer, Roy A., and Evans, Herbert M. The nutritive value of the fatty acids of lard and some of their esters, 108, 431
- . See EVANS and LEPKOVSKY, 108, 439
- , Popper, William, Jr., and Evans, Herbert M. The preparation of crystalline vitamin G, 109, liv
- and Jukes, Thomas H. The vitamin G requirements of the chick, 111, 119
- and —. The effect of some reagents on the "filtrate factor" (a water-soluble vitamin belonging to the vitamin B complex and preventing a dietary dermatitis in chicks), 114, 109
- . See JUKES and LEPKOVSKY, 114, 117
- and Jukes, Thomas H. The effect of some reagents on the "filtrate factor" (a member of the vitamin B complex promoting growth and preventing a dietary dermatitis in chicks), 114, lxi
- , —, and Krause, Myrtise E. The multiple nature of the third factor of the vitamin B complex, 115, 557
- . See FOUTS, LEPKOVSKY, HELMER, and JUKES, 119, xxxiv
- and Jukes, Thomas H. Fractionation of the vitamin G complex, 119, lx
- . The isolation of Factor I in crystalline form, 124, 125
- Lesuk, Alex. See HARROW, MAZUR, CHAMELIN, and LESUK, 119, xlvii
- Letonoff, T. V. A zinc hydroxide powder for the preparation of protein-free filtrates of blood, 106, 693
- and Reinhold, John G. A colorimetric method for the determination of inorganic sulfate in serum and urine, 114, 147
- . See REINHOLD and LETONOFF, 114, lxxxiii
- Leu, Madeline. See QUICK and LEU, 119, lxxxii
- Leva, Ernst. See GUEST and LEVA, 110, 777
- Levene, P. A., and Marker, R. E. Configurational relationship of isopropylcarbinols, 101, 413

- and Harris, Stanton A. The ribosephosphoric acid from yeast adenylic acid, 101, 419
- and Tipson, R. Stuart. The ring structure of uridine, 101, 529
- and Hill, Douglas W. On a dipeptide phosphoric acid isolated from casein, 101, 711
- and Heymann, Karl. On cerebronic acid. VIII, 102, 1
- and Stiller, Eric T. Acetone derivatives of *d*-ribose, 102, 187
- and Marker, R. E. Optical rotations of configurationally related methoxypropionic and β -methoxybutyric nitriles, 102, 297
- and —. Derivatives of monoacetone xylose, 102, 317
- and —. 3-Methyl xylose and 5-methyl xylose, 102, 331
- and —. Phosphoric esters of xylose and of 5-methyl monoacetone xylose. Their bearing on the nature of the pentose of yeast nucleic acid, 102, 347
- . See TAYLOR and LEVENE, 102, 535
- and Yang, P. S. Cerebronic acid. IX, 102, 541
- and —. Oxidation and derivatives of *dl*- α -hydroxystearic acid, 102, 557
- and Hill, Douglas W. The action of pyridine on sugars, 102, 563
- and Marker, R. E. Molecular rotations in members of homologous series, 103, 299
- and —. Action of nitrous acid and nitrosyl chloride on β -phenylpropylamine. A method of separating primary, secondary, and tertiary phenyl chlorides and phenylcarbinols, 103, 373
- and Schormüller, A. Serinephosphoric acid obtained on hydrolysis of vitellinic acid. II, 103, 537
- and Stiller, Eric T. The synthesis of ribose-5-phosphoric acid, 104, 299
- and Tipson, R. Stuart. N-Methyl uridine and its bearing on the structure of uridine, 104, 385
- , Harris, Stanton A., and Stiller, Eric T. *d*-Ribitol-5-phosphoric acid, 105, 153
- and Tipson, R. Stuart. The structure of monotrityl uridine, 105, 419
- and Muskat, Irving E. The structure and the properties of acetone-methylrhamnopyranoside, 105, 431
- . See RAYMOND and LEVENE, 105, lxx
- and Schormüller, A. Synthesis of the phosphoric esters of hydroxyamino acids. II. The synthesis of *dl*-serinephosphoric acid, 105, 547
- and Tipson, R. Stuart. The partial synthesis of ribose nucleotides. I. Uridine 5-phosphoric acid, 106, 113

Levene, P. A.—*continued*

- and Marker, R. E. Symmetrical disubstituted methanes prepared from members of optically active homologous series of disubstituted carboxylic acids and their derivatives, 106, 173
- and Stiller, Eric T. Acetone derivatives of *d*-ribose. II, 106, 421
- and Schormüller, A. Synthesis of the phosphoric esters of hydroxyamino acids. III. Resolution of *dl*-serinephosphoric acid and synthesis of *l*-hydroxyprolinephosphoric acid, 106, 595
- and Tipson, R. Stuart. Monoacetone *d*-xyloketose. A preliminary note, 106, 603
- and Muskat, Irving E. The synthesis of theophylline-5-methylrhamnofuranoside, 106, 761
- and Raymond, Albert L. Xylosephosphoric acids. II, 107, 75
- and Rothen, Alexandre. On Walden inversion. XVIII. Analysis of rotatory dispersion curves of α -substituted normal carboxylic acids, 107, 533
- , —, and Meyer, G. M. Rotations of the nitrophenyl esters of disubstituted acetic and propionic acids and of the corresponding free acids, 107, 555
- and Marker, R. E. Hydrocarbons derived from methylphenyl- and ethylphenylacetic acids 108, 409
- Note on the preparation of crystalline *d*-mannose and of crystalline *d*-ribose, 108, 419
- and Tipson, R. Stuart. The ring structure of thymidine, 109, 623
- and Marker, R. E. The configurational relationship of methylbenzylacetic to methylbenzylpropionic acid, 110, 299
- and —. The configurational relationship of acids of the phenethyl series to those of the normal series, 110, 311
- The configurational relationships of the derivatives of methylbenzyl- and methylphenethyl-, methylheptyl- and methyloctylacetic acids, 110, 323
- and Marker, R. E. The maximum rotations of configurationally related carboxylic acids containing a phenyl or a cyclohexyl group, 110, 329
- and —. The configurational relationship of acids of the isopropyl and isobutyl series to those of the normal series, 111, 299
- and Tipson, R. Stuart. The partial synthesis of ribose nucleotides. II. Muscle inosinic acid, 111, 313
- and Compton, Jack. *d*-Xylo-methylose and derivatives, 111, 325
- and —. Crystalline *d*-gulo-methylose and derivatives, 111, 335

- and Harris, Stanton A. Maximum rotations of carboxylic acids containing a phenethyl group, 111, 725
- and —. Optical rotation of methyloctylphenethylmethane, 111, 735
- and Rothen, Alexandre. Optical rotation of configurationally related aldehydes, 111, 739
- and Yang, P. S. The oxidation of *dl*- α -hydroxystearic acid and its significance as regards the structure of cerebronic acid. A reply to the paper of Klenk and Ditt, 111, 751
- and Harris, Stanton A. Configurational relationships of methylphenyl- and methylhexylacetic acids and an attempt at the correlation of the configurations of 2-hydroxy acids with those of disubstituted acetic acids containing a methyl group, 112, 195
- and Compton, Jack. The structure of *d*-xylomethylose, 112, 775
- and Harris, Stanton A. The configurational relationship of methylcyclohexylcarbinol to methylhexylcarbinol, 113, 55
- . A new synthesis of 1-amino-2-hydroxypropane, 113, 153
- and Compton, Jack. Synthetic nucleosides. IV. Theophylline-5-methyl-*l*-rhamnofuranoside, 114, 9
- , Rothen, Alexandre, and Marker, R. E. Optical rotations and rotatory dispersions in homologous series of aliphatic nitriles, 115, 253
- and Marker, R. E. Optical rotations in homologous series of aliphatic amines, 115, 267
- . Note on the hydrogenation of phenylated carbinols, 115, 275
- , Rothen, Alexandre, and Meyer, G. M. Configurational relationship of members of disubstituted acetic and propionic acids containing an ethyl group, 115, 401
- and —. Optical rotations of configurationally related azides, 115, 415
- and Tipson, R. Stuart. An improved method for the preparation of xylulose and ribulose, 115, 731
- and Compton, Jack. The synthesis of *d*-allomethylose by a series of Walden inversions accompanying alkaline hydrolysis of 5-tosyl monoacetone *l*-rhamnose, 116, 169
- and —. A new method for the preparation of furanose derivatives of pentoses. Monoacetone *l*-arabofuranoside, 116, 189
- and Rothen, Alexandre. Rotatory dispersion of configurationally related aliphatic carbinols, 116, 209

Levene, P. A.—*continued*

— and Compton, Jack. Synthetic nucleosides. V. Theophylline-*d*-allomethyloside,

117, 37

— and Mardashew, Serge. Configurational relationships of the aliphatic and aromatic amino acids,

117, 179

— and —. The correlation of the configuration of norleucine to 2-aminoheptane,

117, 707

— See KUNA and LEVENE,

118, 315

— See BARTLETT, KUNA, and LEVENE,

118, 503, 513

— and Rothen, Alexandre. Note on the configurational relationship of alkyl halides and 2-halogeno acids,

119, 189

— and Christman, Clarence C. On a catalytically induced reaction resembling the Cannizzaro reaction,

120, 575

— and Kreider, Leonard C. Oxidation and hydrolysis of polygalacturonide methyl ester to levo-tartaric acid,

120, 591

— and —. The ring structure of α -methyl-*d*-galacturonide and its derivatives,

120, 597

— and Tipson, R. Stuart. The structure of monoacetone *d*-xylulose,

120, 607

—, Rothen, Alexandre, and Kuna, Martin. Rotatory dispersion of configurationally related amines,

120, 759

—, —, and —. The mechanism of the reaction of substitution and Walden inversion,

120, 777

— and Tipson, R. Stuart. Phosphorylation of monoacetone adenosine and of diacetyl adenosine,

121, 131

— and Kreider, Leonard C. Conversion of uronic acids into corresponding hexoses. I. Conversion of 2,3,4-trimethyl α -methyl-*d*-galacturonide methyl ester into 2,3,4-trimethyl α -methyl-*d*-galactoside,

121, 155

—, Rothen, Alexandre, and Kuna, Martin. The mechanism of the reaction of substitution and Walden inversion. II,

121, 747

—, Tipson, R. Stuart, and Kreider, Leonard C. Conversion of uronic acids into corresponding hexoses. II. Catalytic reduction of the methyl ester of 2,3,4-trimethyl α -methyl-*d*-galacturonide,

122, 199

— and Christman, Clarence C. Conversion of uronic acids into corresponding hexoses. III. Catalytic reduction and deacetylation of the methyl ester of 2,3,4-triacetyl α -methyl-*d*-galacturonide,

122, 203

— and Kuna, Martin. The configurational relationship of 3-aminoheptane to that of norleucine,

122, 291

— and Christman, Clarence C. Conversion of uronic acids into

- corresponding hexoses. IV. Catalytic reduction of the methyl ester of diacetone *d*-galacturonic acid, 122, 661
- and —. The reduction of aminosorbitol hydrochloride with hydriodic acid, 123, 77
- and —. The reduction of glucosaminic acid with hydrogen iodide in glacial acetic acid, 123, 83
- and —. Synthesis of 5-phospho-*d*-arabinose, 123, 607
- . See CHRISTMAN and LEVENE, 124, 453
- and Tipson, R. Stuart. Conversion of uronic acids into corresponding hexoses. V. Transformation of the aldobionic acid (from gum arabic) to the corresponding disaccharide, 125, 345
- and —. VI. Configuration of the glycosidic union of the aldobionic acid from gum arabic, 125, 355
- , Meyer, G. M., and Kuna, Martin. Conversion of uronic acids into corresponding hexoses. VII. Catalytic reduction of methyl ester of hexamethyl methylglycoside of aldobionic acid (of gum arabic) to methylglycoside of hexamethyl 6-glucosidogalactose. Further methylation to methylglycoside of heptamethyl 6-glucosidogalactose, 125, 703
- . See CHRISTMAN and LEVENE, 125, 709
- Levin, Louis.** See MACCORQUODALE, LEVIN, THAYER, and DOISY, 101, 753
- . See MACCORQUODALE, LEVIN, and THAYER, 105, lv
- and Tyndale, H. H. The concentration and purification of the gonadotropic substance of the urine of human female castrates, 109, liv
- Levine, Michael.** See CHARGAFF and LEVINE, 124, 195
- Levine, Victor E., and Richman, Eudice.** The antimony trichloride reaction with compounds containing five-membered monoheterocyclic rings, 101, 373
- . The basal metabolic rate of the Eskimo, 119, lxi
- . Capillary fragility tests on Eskimos and whites living in the Arctic, 119, lxii
- , Sachs, Adolph, and Fabian, A. Appelsis. The blood iron and blood copper of Eskimos, 119, lxiii
- Levy, Albert H.** See FERRY and LEVY, 105, xxvii
- Levy, Milton.** The acidity of formaldehyde and the endpoint in the formol titration, 105, 157
- . The behavior of histidine in the formol titration, 105, li
- . A note on the titration constants of imidazole derivatives, 109, 361
- . Equilibria of the basic amino acids in the formol titration, 109, 365

Levy, Milton—*continued*

— and Silberman, David E.

The reactions of amino and imino acids with formaldehyde, 118, 723

— and Palmer, A. H. Dipeptidase distribution in the cephalic region of the three day chick embryo, 123, lxxiv

— See PALMER and LEVY, 123, xc

Lew, W. See ADDIS, POO, LEW, and YUEN, 113, 497

— See ADDIS, POO, and LEW, 115, 111, 117 116, 343

— See ADDIS, KARNOFSKY, LEW, and POO, 124, 33

Lewis, George T. The cystine and iron content of epidermal tissues in relation to pellagra, 105, lii

Lewis, Helen Geneva, and Luck, James Murray. An apparatus for automatically measuring the respiratory exchange of small animals, 103, 209

— and —. The calorogenic action of glycine, 103, 227

— See LUCK and LEWIS, 105, lv

Lewis, Howard B. See CHASE and LEWIS, 101, 735

— See SILBERMAN and LEWIS, 101, 741

— See TULANE, CHRISTMAN, and LEWIS, 103, 141

— See TULANE and LEWIS, 103, 151

— See VIRTUE and LEWIS, 104, 59, 415

— See LOUGH and LEWIS, 104, 601

— and Grant, R. Lorimer. Some products of the partial hydrolysis of silk, 105, lii

— See CHASE and LEWIS, 106, 315

— See LEE and LEWIS, 107, 649

— See GRANT and LEWIS, 108, 667

— Studies in cystinuria, 109, lv

— and Frayser, Lois. The metabolism of sulfur. XXII. The cystine content of the hair and nails of cystinurics, 110, 23

—, Brown, Barker H., and White, Florence R. The metabolism of sulfur. XXIII. The influence of the ingestion of cystine, cysteine, and methionine on the excretion of cystine in cystinuria, 114, 171

— See WHITE, LEWIS, and WHITE, 117, 663

— See PAPAGEORGE and LEWIS, 119, lxxvi

— See HEARD and LEWIS, 123, 203

— See PAPAGEORGE and LEWIS, 123, 211

— and Brown, Barker H. The cystine content of blood plasma after administration of cystine and methionine to rabbits, 123, lxxv

— See ROUTH and LEWIS, 124, 725

— See BLOCK and LEWIS, 125, 561

- Lewis, Robert C. See RYMER and LEWIS, 114, 361
- Lewis, William H., Jr. See PAGE, KIRK, LEWIS, THOMPSON, and VAN SLYKE, 111, 613
- See KIRK, LEWIS, and THOMPSON, 111, 641
- Lichtenberg, Henry H. See SCHWARZ and LICHTENBERG, 121, 315
- Lichtman, A. L. Fatty acids and glucose in the blood of depancreatized dogs, 120, 35
- Lichtman, S. S. A new procedure for the estimation of bile salts in body fluids based on bile salt hemolysis, 107, 717
- Light, Amos E., Smith, Paul K., Smith, Arthur H., and Anderson, William E. Inorganic salts in nutrition. XI. Changes in composition of the whole animal induced by a diet poor in salts, 107, 689
- Light, Arthur B., and Warren, Clark R. Creatinuria among adolescent males, 104, 121
- Lightbody, Howard D. Variations associated with age in the concentration of arginase in the livers of white rats, 124, 169
- Lindquist, F. E., and Schmidt, Carl L. A. Dielectric constants of aqueous solutions of certain amino acids and related substances, 119, lxiii
- Lineweaver, Hans. The solubility and chemical and physical absorption of nitrogen gas in *Azotobacter* cells, 122, 549
- Link, Karl Paul. See NIEMANN, SCHOEFFEL, and LINK, 101, 337
- See BURKHART, BAUR, and LINK, 104, 171
- See MORELL and LINK, 104, 183
- See NIEMANN, KARJALA, and LINK, 104, 189
- See NIEMANN and LINK, 104, 195, 205
- See NIEMANN, McCUBBIN, and LINK, 104, 737
- See NIEMANN and LINK, 104, 743
- See MORELL, BAUR, and LINK, 105, 1, 15
- See NIEMANN and LINK, 106, 773
- See MORELL and LINK, 108, 763
- See BAUR and LINK, 109, 293
- See MORELL, BAUR, and LINK, 110, 719
- See NIEMANN, ROBERTS, and LINK, 110, 727
- See MORELL and LINK, 114, 123
- See NIEMANN, ANDERSON, and LINK, 116, 447
- See ROBERTS and LINK, 119, 269
- See CAMPBELL and LINK, 120, 471
- See MORELL and LINK, 122, 635
- See SELL and LINK, 125, 229, 235

- Lipschitz, M. A., Potter, V. R., and Elvehjem, C. A. The metabolism of pyruvic acid in vitamin B₁ deficiency and in inanition, 123, 267
- , —, and —. The mechanism of the enzymatic synthesis of cocarboxylase, 124, 147
- Liu, Yun-Pu. See BORSOOK, HUFFMAN, and LIU, 102, 449
- Lobb, Dorothy E. See HATHAWAY and LOBB, 113, 105
- Localio, Sylvio. See DOBRINER, LOCALIO, and STRAIN, 114, xxvi
- Loeffel, Robert G. Absorption spectra of indigo sulfonates, 109, lvi
- Loehr, W. M. See BEUTNER, CAPLAN, and LOEHR, 101, 391
- Logan, Milan A. Calcium and ammonium excretion in the urine of rabbits, 109, 481
- . Composition of cartilage, bone, dentin, and enamel, 110, 375
- and Taylor, Henry L. Solubility of bone salt, 119, 293
- and — . The formation and chemical nature of the bone salt, 119, lxiv
- and — . Solubility of bone salt. II. Factors affecting its formation, 125, 377
- and — . III. Partial solution of bone and carbonate-containing calcium phosphate precipitates, 125, 391
- Lojkin, Mary. See BOOHER and LOJGIN, 123, xiv
- Long, C. N. H., Lukens, F. D. W., and Fry, Edith G. Glycogen resynthesis in depancreatized animals, 105, lii
- and — . Observations on adrenalectomized-depancreatized and hypophysectomized-depancreatized cats, 109, lvi
- Long, M. Louisa. See BISCHOFF and LONG, 116, 285
- Longenecker, H. E. See HILDITCH and LONGENECKER, 122, 497
- Longwell, Bernard B., and Hill, Robert M. A modified Rehberg burette for use with titrating solutions which react with mercury, 112, 319
- Looney, Joseph M., and Childs, Hazel M. A comparison of the methods for the collection of blood to be used in the determination of gases, 104, 53
- and — . The lactic acid and glutathione content of the blood of schizophrenic patients, 105, liii
- and Jellinek, E. Morton. Galactose tolerance as measured by the Folin micro and macro blood sugar methods, 109, lvii
- and Darnell, Matthew C., Jr. The blood pressure-raising principle of adrenal cortex extracts, 114, lxii
- . The effect of exercise on the blood gases, pH, and lactic acid content of the blood of normal and schizophrenic subjects, 123, lxxv

- Lorenz, F. W. See ALMQUIST, LORENZ, and BURMESTER, 106, 365
- , Entenman, C., and Chaikoff, I. L. The influence of age, sex, and ovarian activity on the blood lipids of the domestic fowl, 122, 619
- , Chaikoff, I. L., and Entenman, C. Liver lipids of the laying and non-laying bird, 123, 577
- See ENTENMAN, RUBEN, PERLMAN, LORENZ, and CHAIKOFF, 124, 795
- Loring, Hubert S., and du Vigneaud, Vincent. The isolation and characterization of mesocystine, 102, 287
- , Dorfman, Ralph I., and du Vigneaud, Vincent. The availability of mesocystine for promotion of growth in connection with cystine-deficient diets, 103, 399
- See DU VIGNEAUD, CRAFT, and LORING, 104, 81
- The solubility of the stereoisomers of cystine, 105, liv
- See DU VIGNEAUD, LORING, and CRAFT, 105, 481
- and du Vigneaud, Vincent. The solubility of the stereoisomers of cystine with a note on the identity of stone and hair cystine, 107, 267
- See DU VIGNEAUD, LORING, and CRAFT, 107, 519
- and du Vigneaud, Vincent. The synthesis of crystalline cystinylglycine and benzylcystinylglycine and their isolation from glutathione, 111, 385
- and Stanley, W. M. Isolation of crystalline tobacco mosaic virus protein from tomato plants, 117, 733
- See DU VIGNEAUD, LORING, and MILLER, 118, 391
- and Wyckoff, Ralph W. G. The ultracentrifugal isolation of latent mosaic virus protein, 121, 225
- Accuracy in the measurement of the activity of tobacco mosaic virus protein, 121, 637
- Nucleic acid from tobacco mosaic virus protein, 123, lxxvi
- Loshakoff, Abe. See DUNN and LOSHAKOFF, 113, 359, 691
- Lothrop, W. C. See ANDERSON, LOTHROP, and CREIGHTON, 125, 299
- Lough, S. Allan, and Lewis, Howard B. The reaction of nitrous acid with cystine and related sulfur-containing compounds, 104, 601
- Lowe, R. C. See GIBSON and LOWE, 123, xli
- Lowry, Hope. See GREEN, LOWRY, ELEY, and MCKHANN, 114, xlii
- Lucas, Colin C. See ROSS and LUCAS, 111, 285
- Luck, James Murray. See LEWIS and LUCK, 103, 209, 227
- and Lewis, Helen Geneva. The calorigenic action of glutamic acid, 105, lv

Luck, James Murray—*continued*

- See KURTZ and LUCK, 111, 577
- Liver proteins. I. The question of protein storage, 115, 491
- and Nimmo, Charles Colvin. The effect of hydrogen ion concentration on the extractability of the liver proteins, 119, lxxv
- The effect of potassium iodate on the liver proteins, 123, lxxvii
- Ludewig, Stephan. See CHANUTIN and LUDEWIG, 102, 57
109, xviii
114, xviii
115, 1
- and Chanutin, Alfred. The lipid phosphorus content of hypertrophied hearts and kidneys in the rat, 115, 327
- See CHANUTIN and LUDEWIG, 119, xviii
- See CHANUTIN, HORTENSTINE, COLE, and LUDEWIG, 123, 247
- The blood plasma cholesterol and phospholipid phosphorus in control and partially nephrectomized rats, 123, lxxviii
- See HORTENSTINE, CHANUTIN, and LUDEWIG, 125, 455
- Lukens, F. D. W. See LONG, LUKENS, and FRY, 105, lii
- See LONG and LUKENS, 109, lvi

Lutz, J. George, and Nelson, J. M. Preparation of highly active yeast invertase, 107, 169

- Lyman, Carl M., Schultze, M. O., and King, C. G. The effect of metaphosphoric acid and some other inorganic acids on the catalytic oxidation of ascorbic acid, 118, 757
- and Barron, E. S. Guzman. Studies on biological oxidations. VIII. The oxidation of glutathione with copper and hemochromogens as catalysts, 121, 275
- See BARRON and LYMAN, 123, 229, iv

M

- Macallum, A. Bruce. See FLEMING and MACALLUM, 109, xxxiii
- See LAUGHTON and MACALLUM, 109, lii
- Recent studies on the insuletropic hormone, 114, lxiii
- Pancreatic antagonism and synergism to insulin, 123, lxxviii
- MacCorquodale, D. W., Levin, Louis, Thayer, Sidney A., and Doisy, Edward A. The oxidation of theelin and some theelol derivatives, 101, 753
- , —, and —. The chemistry of theelin and theelol, 105, lv
- See CURTIS, MACCORQUODALE, THAYER, and DOISY, 107, 191

- , Thayer, Sidney A., and Doisy, Edward A. The ovarian follicular hormone, 109, lviii
- , —, and —. The isolation of the principal estrogenic substance of liquor folliculi, 115, 435
- . See THAYER, MACCORQUODALE, MCKEE, and DOISY, 123, cxx
- . See WESTERFELD, MACCORQUODALE, THAYER, and DOISY, 123, cxxvi
- MacDonald, Joseph. See BLANCHARD and MACDONALD, 110, 145
- MacFadyen, Douglas A. The nuclease activity of *Bacillus subtilis*, 107, 297
- Macht, David I., and Bryan, Hilah F. Synergistic action of milk and muscle oxidases, 110, 101
- Mack, G. L. See KERTESZ, DEARBORN, and MACK, 116, 717
- and Tressler, D. K. Vitamin C in vegetables. VI. A critical investigation of the Tillmans method for the determination of ascorbic acid, 118, 735
- MacKay, Eaton M. See DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD, 101, 301
- and Bergman, H. C. The rate of absorption of glucose from the intestinal tract, 101, 453
- and —. The amount of water stored with glycogen in the liver, 105, 59
- . See BUTLER and MACKAY, 106, 107
- Mackay, F. H. See RABINOWITCH, DINGWALL, and MACKAY, 103, 707, 725
- Mackenzie, Laura B. See EISENMAN, MACKENZIE, and PETERS, 116, 33
- Mackinney, G. Properties of carotenes from certain roots and leaves at various stages of development, 108, 45
- . Leaf carotenes, 111, 75
- . On the plastid pigments of marsh dodder, 112, 421
- MacLachlan, P. L. Fat metabolism in plants with special reference to sterols, 113, 197
- . Fat metabolism in plants, with special reference to sterols. II. Differential changes in the cotyledons and in the roots, stems, and leaves, 114, 185
- . See KOCHAKIAN, MACLACHLAN, and MCEWEN, 122, 433
- MacLeod, Grace. See ROSE, VAHLTEICH, and MACLEOD, 104, 217
- Maculla, Ada. See GRAFF and MACULLA, 110, 71
- Maculla, Esther. See GRAFF, MACULLA, and GRAFF, 121, 71, 81
- Macy, Icie G. See GIVENS and MACY, 102, 7
- . See ERICKSON, STONER, and MACY, 103, 235
- . See ERICKSON, GULICK, HUNSCHER, and MACY, 106, 145

Macy, Icie G.—*continued*

- See ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY, 109, xxx
- See ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY, 114, xxxii
- See ERICKSON, WILLIAMS, HUMMEL, and MACY, 118, 15
- See ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY, 118, 569
- See WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY, 118, 599
- See HUNSCHER, HUMMEL, MACY, TODD, and FRANCIS, 119, lii
- See BERNSTEIN, JONES, ERICKSON, WILLIAMS, AVRIN, and MACY, 122, 507
- See ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY, 122, 515
- See WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY, 123, 111
- Madden, Robert J.** See WOOD, MADDEN, and CARTER, 117, 1
- See ELVEHJEM, MADDEN, STRONG, and WOOLLEY, 123, 137
- See WOOLLEY, STRONG, and MADDEN, 123, cxxx
- See WOOLLEY, STRONG, MADDEN, and ELVEHJEM, 124, 715
- Maddock, Stephen J., Trimble, Harry C., and Carey, Benjamin W., Jr.** Is *d*-glucose ab-

sorbed from the stomach of the dog? 103, 285

- See TRIMBLE and MADDOCK, 107, 133
- See THANNHAUSER, REICHEL, GRATAN, and MADDOCK, 121, 709, 715, 721, 727
- See TRIMBLE and MADDOCK, 123, cxxiii
- See THANNHAUSER, REICHEL, GRATAN, and MADDOCK, 124, 631
- Madsen, L. L.** See MCCAY and MAYNARD, 109, 29
- Magers, Elizabeth J.** A study of certain phases of metabolism in poliomyelitis, 105, lvi
- Malisoff, William Marias, and Stenbuck, Frederick A.** Effect of short electric waves on sterol colloids, 115, 87
- Malloy, Helga Tait, and Evelyn, Kenneth A.** The determination of bilirubin with the photoelectric colorimeter, 119, 481
- and —. Oxidation method for bilirubin determinations in bile and meconium with the photoelectric colorimeter, 122, 597
- See EVELYN and MALLOY, 123, xxxiv
- Man, Evelyn B., and Peters, John P.** Gravimetric determination of serum cholesterol adapted to the Man and Gildea fatty acid method, with a note on the estimation of lipid phosphorus, 101, 685
- See PETERS and MAN, 107, 23

- A note on the stability and quantitative determination of phosphatides, 117, 183
- and Gildea, Edwin F. Variations in lipemia of normal subjects, 119, 769
- and —. Notes on the extraction and saponification of lipids from blood and blood serum, 122, 77
- Manery, Jeanne F., Danielson, Irvin S., and Hastings, A. Baird. Connective tissue electrolytes, 124, 359
- Mangun, George. See MYERS and MANGUN, 114, lxxv
- and Myers, Victor C. The creatine content of cardiac and voluntary muscle and its relation to phosphorus and potassium, 123, lxxix
- Mann, Frank C. See FLOCK, BOLLMAN, and MANN, 114, xxxvi
- 115, 179, 201
- See STEKOL and MANN, 117, 619
- See FLOCK, BOLLMAN, HESTER, and MANN, 119, xxxiii
- 121, 117
- See FLOCK, BOLLMAN, and MANN, 123, xxxvi
- 125, 49
- See FLOCK, BOLLMAN, MANN, and KENDALL, 125, 57
- Manning, P. D. V. See STOKSTAD and MANNING, 125, 687
- Marble, Alexander. See SMITH and MARBLE, 117, 673
- Mardashew, Serge. See LEVENE and MARDASHEW, 117, 179, 707
- Margaria, Rodolfo, and Green, Arda Alden. The first dissociation constant, pK'_1 , of carbonic acid in hemoglobin solutions and its relation to the existence of a combination of hemoglobin with carbon dioxide, 102, 611
- See VAN SLYKE, DILLON, and MARGARIA, 105, 571
- Marker, R. E. See LEVENE and MARKER, 101, 413
- 102, 297
- 103, 299, 373
- 106, 173
- 108, 409
- 110, 299, 311, 329
- 111, 299
- See LEVENE, ROTHEN, and MARKER, 115, 253
- See LEVENE and MARKER, 115, 267
- Markley, K. S., and Sando, Charles E. The melting point of naturally occurring *n*-nonacosane. A correction, 101, 431
- and —. Petroleum ether- and ether-soluble constituents of cranberry pomace, 105, 643
- , Hendricks, Sterling B., and Sando, Charles E. Constituents of the wax-like coating of the pear, *Pyrus communis*, L., 111, 133
- See SANDO, MARKLEY, and MATLACK, 114, 39
- , Nelson, E. K., and Sherman, Mildred S. Some wax-like

Markley, K. S.—*continued*

constituents from expressed oil from the peel of Florida grapefruit, *Citrus grandis*,

118, 433

— and Sando, Charles E. The wax-like constituents of the cuticle of the cherry, *Prunus avium*, L.,

119, 641

—, —, and Hendricks, Sterling B. Petroleum ether-soluble and ether-soluble constituents of grape pomace,

123, 641

Marks, Graham W., and Fox, Denis L. The inactivation of mussel catalase by oxygen,

103, 269

— The inactivation of catalases from certain marine animals by oxygen,

105, 489

— Proportionality studies on catalase,

107, 623

— The effect of glutathione and other substances on the inactivation of catalases,

115, 299

Marrian, Guy Frederic, Cohen, S. L., and Watson, M. Observations on the excretion of estrin during pregnancy,

109, lix

— and Butler, Gordon Cecil. The isolation of a new compound from the urine of women with adrenal tumors,

119, lxvi

— See BUTLER and MARRIAN,

119, 565

124, 237

— See ODELL and MARRIAN,

125, 333

Marsh, G. L. See JOSLYN, MARSH, and MORGAN,

105, 17

Marsh, Norman. See KOEHLER, MARSH, and HILL,

119, lix

Marshall, E. K., Jr. Determination of sulfanilamide in blood and urine,

122, 263

Marteny, W. W. See ANDERSON, SEIGLE, KRZNARICH, RICHARDS, and MARTENY,

121, 165

Martensen, E. W. See ECKER, PILLEMER, MARTENSEN, and WERTHEIMER,

123, 351, 359

Martin, Gustav J., and Gardner, R. E. The trichogenic action of the sulfhydryl group in hereditary hypotrichosis of the rat,

111, 193

Martin, Hugh E. See PETERS and MARTIN,

124, 249

Martin, Lay. Gastric juice. I. Studies on the proteins of the gastric juice of humans,

102, 113

— II. Studies on a urea-splitting enzyme and pepsin in relation to the proteins,

102, 131

Martin, Marie F., and Corley, Ralph C. The excretion of allantoin and uric acid by the dog maintained on a purine-free diet and on a protein-free diet. The influence of the administration of glycine,

105, lvii

Martindale, Ruth. See MAY, MARTINDALE, and BOYD,

104, 255

- Marvel, Carl S.** See **JACKSON** and **MARVEL**, 103, 191
- . See **ECK** and **MARVEL**, 106, 387
- Marx, Walter, and Sobotka, Harry.** Colorimetric determination of equilenin and dihydroequilenin, 124, 693
- Mason, Harold L.** See **KENDALL**, **MASON**, **McKENZIE**, **MYERS**, and **KOELSCH**, 105, xlv
- . See **KENDALL**, **MASON**, **McKENZIE**, and **MYERS**, 109, p. 1
- . See **KENDALL**, **MASON**, **MYERS**, and **ALLERS**, 114, lvii
- , **Myers, Charles S.**, and **Kendall, Edward C.** The chemistry of crystalline substances isolated from the suprarenal gland, 114, 613
- , — , and — . Chemical studies of the suprarenal cortex. II. The identification of a substance which possesses the qualitative action of cortin; its conversion into a diketone closely related to androstenedione, 116, 267
- . See **KENDALL**, **MASON**, **HOEHN**, and **McKENZIE**, 119, lvi
- , **Hoehn, Willard M.**, **McKENZIE**, **Bernard F.**, and **Kendall, Edward C.** Chemical studies of the suprarenal cortex. III. The structures of Compounds A, B, and H, 120, 719
- . See **KENDALL**, **MASON**, **HOEHN**, and **McKENZIE**, 123, lxvii
- , **Hoehn, Willard M.**, and **Kendall, Edward C.** Chemical studies of the suprarenal cortex. IV. Structures of Compounds C, D, E, F, and G, 124, 459
- . Chemical studies of the suprarenal cortex. V. Conversion of Compound E to the series which contains four atoms of oxygen and to adrenosterone by the action of calcium hydroxide, 124, 475
- Mason, Howard H.** The metabolism of carbohydrates in a case of galactosuria, 105, lviii
- Mason, Inez D.**, and **Palmer, Leroy S.** Preparation of white zein from yellow corn, 107, 131
- Mason, Morton F.**, **Resnik, H.**, **Jr.**, and **Harrison, Tinsley R.** Some effects of the introduction of electrolytes into the cisterna on the blood pressure of dogs, 109, lix
- . Halide distribution in body fluids in chronic bromide intoxication, 113, 61
- , **Blalock, Alfred**, and **Harrison, Tinsley R.** The direct measurement of renal blood flow and oxygen consumption in unanesthetized dogs, 114, lxiv
- and **Evers, Ray.** Observations on the proteolytic activity of the sera of dogs with experimental uremia, 119, 735

- Massengale, O. N.** See **BILLS**, **MASSENGALE**, **MCDONALD**, and **WIRICK**, 108, 323
- See **BILLS**, **MCDONALD**, **MASSENGALE**, **IMBODEN**, **HALL**, **HERGERT**, and **WALLENMEYER**, 109, vii
- See **BILLS**, **MASSENGALE**, **HICKMAN**, and **GRAY**, 123, x
- Mathews, A. P.** See **VILTER**, **SPIES**, and **MATHEWS**, 125, 85
- Matlack, M. B.**, and **Sando, Charles E.** A contribution to the chemistry of tomato pigments. The coloring matter in American red and purple tomatoes (*Lycopersicum esculentum*), 104, 407
- Pigments of pink grapefruits, *Citrus grandis* (L., Osbeck), 110, 249
- See **SANDO**, **MARKLEY**, and **MATLACK**, 114, 39
- See **BALLS**, **MATLACK**, and **TUCKER**, 122, 125
- See **BALLS** and **MATLACK**, 123, 679
125, 539
- Matthews, Vida J.**, **Newton, Joseph K.**, and **Bloor, W. R.** The lipids of the skin in experimental diabetes, 108, 145
- Mattice, M. R.**, **Bruger, Maurice**, and **Deren, M.** Effect of dextrose ingestion on serum inorganic sulfate, 109, lx
- Mattill, H. A.** See **KUYPER** and **MATTILL**, 103, 51
- See **OLCOTT** and **MATTILL**, 104, 423
- See **SEEGERS** and **MATTILL**, 105, lxxvii
110, 531
- See **FRENCH** and **MATTILL**, 114, xxxvii
- See **OLCOTT** and **MATTILL**, 114, lxxvii
- See **SCHULTZ** and **MATTILL**, 122, 183
- Maxwell, L. C.**, and **Bischoff, Fritz.** Chemical studies on the pituitary gonadotropic hormone, 112, 215
- See **BISCHOFF** and **MAXWELL**, 114, xi
- May, Clarence E.**, **Martindale, Ruth**, and **Boyd, William F.** The isolation and detection of bilirubin, 104, 255
- Maynard, L. A.** See **MCCAY** and **MAYNARD**, 109, 29
- and **McCay, C. M.** Studies of fat metabolism in lactation, 109, lxi
- See **ELLIS** and **MAYNARD**, 118, 701
- , **Hodson, Adrian**, **Ellis, Gordon**, and **McCay, C. M.** The blood precursor of milk fat, 119, lxvi
- Mazur, Abraham.** See **HARROW**, **MAZUR**, and **SHERWIN**, 102, 35
- See **HARROW**, **MAZUR**, **BOREK**, and **SHERWIN**, 105, xxxiv
- The sulfur distribution and basic amino acids of *Limulus* hemocyanin, 118, 631
- See **HARROW**, **MAZUR**, **CHAMELIN**, and **LESUK**, 119, xlvii

- and **Clarke, H. T.** The amino acids of certain marine algæ, 123, 729
- McAmis, Ava Josephine, and Sweet, Marion H.** The influence of a diet rich in avocado on growth and on the quality of body fat in the albino rat, 114, lxiv
- McCarthy, Mary.** See **ROSE** and **EXTON**, 109, lxxvi
- McCay, C. M., and Maynard, L. A.** The effect of ingested cod liver oil, shark liver oil, and salmon oil upon the composition of the blood and milk of lactating cows, 109, 29
- See **MAYNARD** and **MCCAY**, 109, lxi
- , **Tunison, A. V., Crowell, Mary, and Paul, Henry.** The calcium and phosphorus content of the body of the brook trout in relation to age, growth, and food, 114, 259
- See **MAYNARD, HODSON, ELLIS, and MCCAY**, 119, lxvi
- and **Tunison, A. V.** The toxicity of linseed meal, 123, lxxx
- McClendon, J. F.** Iodine and goiter with especial reference to the Far East, 102, 91
- , **Hamilton, R. H., Jr., and Holdridge, Curtis.** The determination of iodine in blood, urine, and cabbage, 105, lviii
- See **CAVETT, RICE, and McCLENDON**, 109, xvii
- and **Street, Harold R.** Homozygous mice as biochemical test animals, 109, lxi
- See **CAVETT, RICE, and McCLENDON**, 110, 673
- , **Bratton, A. Calvin, and White, Ralph V.** Determination of iodine in ten cubic centimeters of blood by burning in platinum combustion tube with screw feed, and distillation, 119, lxvii
- and —. A new method for determination of iodine in five cubic centimeters of blood or other biological material, 123, 699
- and **Rice, Carl O.** Blood iodine by the **McClendon-Bratton** method, 123, lxxxi
- McCollum, E. V.** See **KRUSE, SCHMIDT, and McCOLLUM**, 106, 553
- See **ORENT, KRUSE, and McCOLLUM**, 106, 573
- See **ITTER, ORENT, and McCOLLUM**, 108, 571, 579, 585
- See **DAY, KRUSE, and McCOLLUM**, 112, 337
- See **PREBLUDA and McCOLLUM**, 119, lxxix
- See **DAY, STEIN, and McCOLLUM**, 123, xxviii
- McConnell, Duncan.** See **GRUNER, McCONNELL, and ARMSTRONG**, 121, 771
- McConnell, Kenneth P., and Sinclair, Robert Gordon.** Passage of elaidic acid through the placenta and also into the milk of the rat, 118, 123

- McConnell, Kenneth P.**—*continued*
- and —. Evidence of selection in the building up of brain lecithins and cephalins, 118, 131
- McCoord, A. B.** See **CLAUSEN** and **McCOORD**, 105, xv
109, xx
113, 89
119, xviii
- McCoy, Richard H.** See **ROSE**, **McCoy**, **MEYER**, **CARTER**, **WOMACK**, and **MERTZ**, 109, lxxvii
- , **Meyer, Curtis E.**, and **Rose, William C.** Feeding experiments with mixtures of highly purified amino acids. VIII. Isolation and identification of a new essential amino acid, 112, 283
- See **McLEAN** and **McCoy**, 114, lxxv
- See **ROSE**, **KEMMERER**, **WOMACK**, **MERTZ**, **GUNTHER**, **McCoy**, and **MEYER**, 114, lxxxv
- and **Rose, William C.** The relation of glycine and serine to growth, 117, 581
- McCubbin, Robert J.** See **NIE-MANN**, **McCUBBIN**, and **LINK**, 104, 737
- McCullagh, D. Roy**, and **Picha, V.** The application of a new chemical procedure for the study of diffusible blood iodine, 105, lix
- A new method for the determination of iodine, 107, 35
- and **Stimmel, Benjamin F.** A biochemical method for the assay of the thyrotropic hormone of the pituitary gland, 109, lxii
- See **STIMMEL** and **McCULLAGH**, 116, 21
- , **Osborn, W. O.**, and **Osgard, Bertha.** Inactive androgenic material in human blood and urine, 123, lxxxi
- McCune, D. J.** See **CULBERT**, **McCUNE**, and **WEECH**, 119, 589
- McDonald, Francis G.** The stability of carotene in ethyl esters of fatty acids, and in liver and vegetable oils, 103, 455
- See **BILLS**, **MASSENGALE**, **McDONALD**, and **WIRICK**, 108, 323
- See **BILLS**, **McDONALD**, **MASSENGALE**, **IMBODEN**, **HALL**, **HERGERT**, and **WALLENMEYER**, 109, vii
- The multiple nature of vitamin D. III. Irradiated 22-dihydroergosterol, 114, lxxv
- McEllroy, William S.** See **WILSON**, **STRICKLER**, and **McELLROY**, 123, cxxix
- McEwen, H. Douglas.** See **O'BRIEN**, **McEWEN**, and **MORGAREIDGE**, 119, lxxiii
- See **KOCHAKIAN**, **MacLACHLAN**, and **McEWEN**, 122, 433
- McFarlane, W. D.** The distribution of iron in tissues, particularly liver, during peptic digestion and autolysis, 106, 245
- and **Milne, Helen I.** Iron

- and copper metabolism in the developing chick embryo, 107, 309
- See GUEST and McFARLANE, 123, xlvii
- McGuire, Grace, and Falk, K. George.** Studies on enzyme action. XLVII. Lipase action of serum, 105, 373
- See FALK and McGUIRE, 105, 379
- and Falk, K. George. Directive influences in biological systems. IV. A further study of lipase actions of Type I pneumococci, 105, 669
- See FALK and McGUIRE, 108, 61
- McHenry, E. W., and Gavin, Gertrude.** The B vitamins and fat metabolism. I. Effects of thiamine, riboflavin, and rice polish concentrate upon body fat, 125, 653
- McIntyre, A. R., and Burke, J. C.** The growth of algæ in synthetic bromine-free medium, 119, lxviii
- See BURKE and McINTYRE, 123, xvii
- McJunkin, F. A.** See TWEEDY, TEMPLETON, and McJUNKIN, 109, xcii
- McKee, R. W.** See THAYER, MACCORQUODALE, MCKEE, and DOISY, 123, cxx
- McKenzie, Bernard F.** See KENDALL, MASON, MCKENZIE, MYERS, and KOELSCH, 105, xlv
- See KENDALL, MASON, MCKENZIE, and MYERS, 109, p. 1
- See KENDALL, MASON, HOEHN, and MCKENZIE, 119, lvi
- See MASON, HOEHN, MCKENZIE, and KENDALL, 120, 719
- See KENDALL, MASON, HOEHN, and MCKENZIE, 123, lxvii
- McKhann, Charles F.** See GREEN and MCKHANN, 109, xxxvii
- See GREEN, LOWRY, ELEY, and MCKHANN, 114, xlii
- McLean, Franklin C., and Hastings, A. Baird.** The state of calcium in the fluids of the body, 105, lx
- and —. A biological method for the estimation of calcium ion concentration, 107, 337
- See HASTINGS, McLEAN, EICHELBERGER, HALL, and DA COSTA, 107, 351
- and Hastings, A. Baird. The state of calcium in the fluids of the body. I. The conditions affecting the ionization of calcium, 108, 285
- and Hinrichs, Marie A. The inverse relationship between calcium and phosphate in the blood, 109, lxiii
- and McCoy, Richard H. Calcification in rachitic cartilage induced by administration of phosphate, and by parathyroid extract, 114, lxxv
- McLean, Regina.** See MORISON, McLEAN, and JACKSON, 122, 439

- McMeekin, Thomas L.** See COHN, McMEEKIN, and GREENSTEIN, 109, xxi
- . The separation of a histamine-like substance from hydrolyzed proteins, 109, lxiv
- . See COHN and McMEEKIN, 114, xx
- . Addition compounds of amino acids with formamide, 114, lxvi
- . A study of the preparation and of the conditions for hydrolytic activity of asparaginase, 123, lxxxii
- McNamara, E. W.** See TWEEDY, McNAMARA, TEMPLETON, and PATRAS, 119, xcix
- McShan, W. H., and French, H. E.** The chemistry of the lactogenic hormone extracts, 117, 111
- Mecchi, E.** See KLOSE, ALMQUIST, and MECCHI, 125, 681
- Medes, Grace.** Is cystine sulfide an intermediate in the oxidative metabolism of cystine? 109, lxiv
- . A study of the cystine content of normal urine, 114, lxvii
- Medlar, E. M.** See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, 103, 93
- Meeker, Dorothy R., and Kesten, H. D.** Composition of pathological calcium deposits, 113, 289
- Mehl, John W., and Schmidt, Carl L. A.** Diffusion coefficients of potassium chloride, glycine, and alanine, 114, lxvii
- . Studies on the proteins of smooth muscle. I, 123, lxxxiii
- Meigs, Edward B., Turner, William A., Kane, Edward A., and Shinn, Leo A.** Calcium and phosphorus metabolism in dairy cows. VII. The effects on calcium and phosphorus metabolism of feeding rations low in calcium for long periods, 105, lx
- . See TURNER, MEIGS, and CONVERSE, 114, civ
- Melnick, Daniel, and Field, Henry, Jr.** Studies on the chemical determination of vitamin B₁, 123, lxxxiii
- Meloche, V. W.** See CLIFCORN, MELOCHE, and ELVEHJEM, 111, 399
- Mendel, Lafayette B.** See SHERMAN, MENDEL, and SMITH, 109, lxxxiii
- 113, 247, 265
- Menzel, Arthur E. O.** See HEIDELBERGER and MENZEL, 104, 655
- 118, 79
- and **Heidelberger, Michael.** Protein fractions of the human strain, H-37, of tubercle bacillus. II, 124, 89
- and —. Cell protein fractions of bovine and avian tubercle bacillus strains and of the timothy-grass bacillus, 124, 301
- Mertz, Edwin T.** See ROSE,

- McCoy, MEYER, CARTER,
WOMACK, and MERTZ,
109, lxxvii
- See ROSE, KEMMERER,
WOMACK, MERTZ, GUNTHER,
McCoy, and MEYER,
114, lxxxv
- Metzger, Nannette. See BAU-
MANN, SPRINSON, and METZ-
GER,
102, 773
105, 269
- See BAUMANN, METZGER,
and SPRINSON, 105, ix
- See BAUMANN, SPRINSON,
and METZGER, 109, v
119, viii
- See BAUMANN and METZ-
GER, 121, 231
123, vi
- Meyer, Curtis E., and Rose, Wil-
liam C. Arginine metabolism.
II. The relation of the arginine
content of the diet to the
creatine-creatinine production
during growth, 102, 461
- See ROSE, MCCOY, MEYER,
CARTER, WOMACK, and MERTZ,
109, lxxvii
- See MCCOY, MEYER, and
ROSE, 112, 283
- See ROSE, KEMMERER,
WOMACK, MERTZ, GUNTHER,
McCoy, and MEYER,
114, lxxxv
- and Rose, William C. The
spatial configuration of α -
amino- β -hydroxy- n -butyric
acid, 115, 721
- Meyer, G. M. See LEVENE,
ROTHEN, and MEYER,
107, 555
115, 401
- See LEVENE, MEYER, and
KUNA, 125, 703
- Meyer, Karl. On catalytic oxi-
dations. II. The oxidation of
benzaldehyde, 103, 25
- III. The oxidation of py-
ruvic acid, 103, 39
- IV. Photochemical oxida-
tion of some ethylenic double
bonds, 103, 597
- V. The oxidation of ergos-
terol, 103, 607
- and Palmer, John W. The
polysaccharide of the vitreous
humor, 107, 629
- and —. On the sugar radicals
of some "mucoids,"
109, lxv
- See PALMER and MEYER,
109, lxxiii
- , Thompson, Richard, Palmer,
John W., and Khorazo, De-
vorah. The purification and
properties of lysozyme,
113, 303
- , Palmer, John W., Thompson,
Richard, and Khorazo, De-
vorah. On the mechanism of
lysozyme action, 113, 479
- and —. A new classification
of glycoproteins,
114, lxviii
- and —. Observations on the
polyuronic acids of vitreous
humor and umbilical cord,
114, lxix
- and —. On glycoproteins.
II. The polysaccharides of
vitreous humor and of umbil-
ical cord, 114, 689
- , Dubos, René J., and Smyth,
Elizabeth M. The hydrolysis
of the polysaccharide acids of

Meyer, Karl—*continued*

- vitreous humor, of umbilical cord, and of streptococcus by the autolytic enzyme of pneumococcus, 118, 71
- , **Smyth, Elizabeth M.**, and **Palmer, John W.** On glycoproteins. III. The polysaccharides from pig gastric mucosa, 119, 73
- , —, and —. The polysaccharides from pig gastric mucosa, 119, lxx
- See **PALMER, SMYTH**, and **MEYER**, 119, 491
- , **Palmer, John W.**, and **Smyth, Elizabeth M.** On glycoproteins. V. Protein complexes of chondroitinsulfuric acid, 119, 501
- and **Smyth, Elizabeth M.** On glycoproteins. VI. The preparation of chondroitinsulfuric acid, 119, 507
- and —. The isolation of a mucoitin disulfuric acid from gastric mucin, 123, lxxxiv
- Meyer, Roland K.** See **CARTLAND, MEYER, MILLER**, and **RUTZ**, 109, 213
- See **CARTLAND** and **MEYER**, 112, 9
- , **Miller, Lloyd C.**, and **Cartland, George F.** The biological activity of theelol, 112, 597
- See **GUSTUS, MEYER**, and **WOODS**, 114, 59
- Mezincescu, M. D.**, and **Szabo, F.** Method for the determination of the non-protein nitrogen of tissue, 115, 131
- Michaelis, Leonor**, and **Schubert**,

- Maxwell P.** The reaction of iodoacetic acid on mercaptans and amines, 106, 331
- See **GODDARD** and **MICHAELIS**, 106, 605
- 112, 361
- and **Smyth, C. V.** Influence of certain dyestuffs on fermentation and respiration of yeast extract, 113, 717
- and —. An improved method of preparing hexosemonophosphate from yeast extract, 114, lxx
- and **Schubert, Maxwell P.** Dimethylglycine buffer, 115, 221
- , —, and **Smyth, C. V.** Potentiometric study of the flavins, 116, 587
- and —. Some problems in two-step oxidation treated for the case of phenanthrenequinonesulfonate, 119, 133
- and **Schwarzenbach, G.** The intermediate forms of oxidation-reduction of the flavins, 123, 527
- and —. The semiquinone of lactoflavin, 123, lxxxiv
- Michel, Harry O.** See **BERNHEIM** and **MICHEL**, 118, 743
- A spectrophotometric method for the determination of methemoglobin in hemoglobin solutions, 119, lxix
- A study of sulfhemoglobin, 123, lxxxv
- Mickelsen, Olaf**, **Waisman, Harry A.**, and **Elvehjem, C. A.** The inactivity of nicotinic acid in chick dermatitis, 124, 313

- . See WOOLLEY, WAISMAN, MICKELSEN, and ELVEHJEM, 125, 715
- Milhorat, Ade T. Liver arginase in myasthenia gravis. A contribution to the question of the origin of creatine, 111, 379
- and Toscani, Vincent. The metabolism of glycolic acid in progressive muscular dystrophy, 114, 461
- Miller, Benjamin F., and Van Slyke, Donald D. A direct microtitration method for blood sugar, 114, lxxi, 583
- . See DUBOS and MILLER, 121, 429
- and Dubos, René J. Studies on the presence of creatinine in human blood, 121, 447
- and — . Determination by a specific, enzymatic method of the creatinine content of blood and urine from normal and nephritic individuals, 121, 457
- Miller, C. O. See SWARTZ and MILLER, 103, 651
- Miller, E. S., Zscheile, F. P., Jr., Koch, Elizabeth M., Hogness, T. R., and Koch, F. C. Spectroscopic evidence for different modifications of cholesterol resulting from simple chemical treatment, 109, lxx
- . See KASS, MILLER, and BURR, 123, lxvi
- Miller, Edgar G., Jr. See COCKRILL, MILLER, and KURZROK, 105, xvi
- . See KELLEY and MILLER, 110, 113, 119
- . See EASTMAN and MILLER, 110, 255
- . See STEIN and MILLER, 125, 599
- Miller, Gail Lorenz. See DU VIGNEAUD and MILLER, 116, 469
- and du Vigneaud, Vincent. The cystine content of insulin, 118, 101
- . See DU VIGNEAUD, LORING, and MILLER, 118, 391
- Miller, Lila. Peptic hydrolysis of lactalbumin, 109, lxvi
- and Calvery, Herbert O. Enzymatic hydrolysis of lactalbumin, 116, 393
- Miller, Lloyd C. See CARTLAND, MEYER, MILLER, and RUTZ, 109, 213
- . See MEYER, MILLER, and CARTLAND, 112, 597
- . See CURTIS, MILLER, and WITT, 119, xxi
- Miller, Max. The diffusible calcium of serum and transudates *in vivo*, 122, 59
- . Ionized calcium of serum and transudates *in vivo*, 122, 71
- Miller, T. G. See HOFFMAN, ABBOTT, KARR, and MILLER, 123, lvii
- Milne, Helen I. See MCFARLANE and MILNE, 107, 309
- Milner, Harold W. See SMITH and MILNER, 104, 437
- . See SPOEHR and MILNER, 111, 679
- . See SPOEHR and MILNER, 116, 493

- Milner, R. T.** See SANDO, MILNER, and SHERMAN, 109, 203
- Milone, H. S.** See SULLIVAN, MILONE, and EVERITT, 125, 471
- Mindlin, Rowland L., and Butler, Allan M.** The determination of ascorbic acid in plasma; a macromethod and micro-method, 122, 673
- Miraglia, Paul Reveri.** See HEPBURN and MIRAGLIA, 105, xxxviii
- Mirsky, I. Arthur.** See FREED, MIRSKY, and SOSKIN, 112, 143
- Mishkind, Daniel.** See TAUBER, KLEINER, and MISHKIND, 110, 211
- Mitchell, H. H.** The effect of the proportions of fat and carbohydrate in the diet upon the excretion of metabolic nitrogen in the feces, 105, 537
- The substitution of dithioethylamine (cystine amine) for cystine in the diet of the white rat, 111, 699
- Mitchell, Helen S., and Dodge, Warren M.** Nutritional cataract in rats, 105, lxi
- and Cook, Gladys M. The effect of type and amount of protein on the cataract-producing action of galactose, 123, lxxxvi
- Mitchell, Philip H., and Taylor, Ivon R.** The dissociation constant of cresol red in sea water, 105, lxii
- Moetsch, J. C.** See RAIZISS, SEVERAC, MOETSCH, and CLEMENCE, 123, xcix
- Mohammad, Ali.** See EMERSON, EMERSON, MOHAMMAD, and EVANS, 122, 99
- See EMERSON, MOHAMMAD, EMERSON, and EVANS, 124, 377
- Monaghan, Betty R.** See WHITE and MONAGHAN, 113, 371
- Montgomery, Hugh.** Quantitative studies of the composition of glomerular urine. XII. The reaction of glomerular urine of frogs and *Necturi*, 110, 749
- See PIERCE and MONTGOMERY, 110, 763
- Moore, Carl V., Erlanger, Ruth J., and West, Edward S.** Condensation products of acetoacetic ester. IV. Two highly reactive compounds of glucose and acetoacetic ester, 113, 43
- Moore, Elinor, and Wilson, D. Wright.** The basic extractives of pecten muscle, 105, lxiii
- and —. The nitrogenous extractives of pecten muscle, 114, lxxi
- and —. Nitrogenous extractives of scallop muscle. I. The isolation and a study of the structure of octopine, 119, 573
- and —. II. Isolations from and quantitative analyses of muscles from freshly killed scallops, 119, 585
- Moore, J. M.** See SCHAILBLE, BANDEMER, and MOORE, 109, lxxix

- Moreland, Ferrin B.** See JOHLIN and MORELAND, 103, 107
- , On some changes in the chemical composition of the blood of the turtle following complete anoxia, 117, 471
- Morell, Sam, and Link, Karl Paul.** The methylglycosides of the naturally occurring hexuronic acids. II. The kinetics of the hydrolysis of α -methyl-*d*-galacturonide, 104, 183
- , **Baur, Lorenz, and Link, Karl Paul.** The methylglycosides of the naturally occurring hexuronic acids. III. Polygalacturonic acid-methylglycosides derived from pectin, 105, 1
- , —, and —. Note on the preparation of *d*-galacturonic acid in large quantity, 105, 15
- and **Link, Karl Paul.** Derivatives of *d*-galacturonic acid. I. Esterification and acylation of *d*-galacturonic acid, 108, 763
- , **Baur, Lorenz, and Link, Karl Paul.** Derivatives of *d*-galacturonic acid. II. The synthesis of α -acetobromo-*d*-galacturonic acid methyl ester and its conversion to β -methyl-*d*-galacturonide, 110, 719
- and **Link, Karl Paul.** Note on the preparation of sinigrin, 114, 123
- Morgan, Agnes Fay.** See SMITH and MORGAN, 101, 43
- , See JOSLYN, MARSH, and MORGAN, 105, 17
- and **Samisch, Zdenka.** The sequence and extent of tissue changes produced by viosterol and parathyroid extract, 105, lxiv
- , **Kimmel, Louise, Thomas, Rachel, and Samisch, Zdenka.** The effects of moderate doses of viosterol and of parathyroid extract upon rats, 106, 531
- and **Samisch, Zdenka.** The sequence and extent of tissue changes resulting from moderate doses of viosterol and parathyroid extract, 108, 741
- , **Kimmel, Louise, and Hawkins, Nora C.** A comparison of the hypervitaminoses induced by irradiated ergosterol and fish liver oil concentrates, 119, lxx
- , 120, 85
- Morgan, Vincent E., and Chichester, Donald F.** Properties of the blood of the domestic fowl, 110, 285
- , Studies on myoglobin. I. The solubility of myoglobin in concentrated ammonium sulfate solutions, 112, 557
- Morgareidge, Kenneth.** Spectrophotometric studies on the Liebermann-Burchard reaction for sterols, 109, lxvii
- , See O'BRIEN, McEWEN, and MORGAREIDGE, 119, lxxiii
- Morgulis, Sergius.** Studies on urinary acidity. II, 103, 757
- , Glycolysis and glutathione, 109, lxviii
- and **Spencer, Howard C.**

Morgulis, Sergius—*continued*

- Biochemical studies on the muscles of dystrophic rabbits, 114, lxxii
- See DUNN and MORGULIS, 118, 545
- See SPENCER, MORGULIS, and WILDER, 120, 257
- Glycolysis and glutathione, 123, 1
- , Wilder, Violet M., Spencer, Howard C., and Eppstein, S. H. Studies on the lipid content of normal and dystrophic rabbits, 124, 755
- and Osheroff, William. Mineral composition of the muscles of rabbits on a diet producing muscle dystrophy, 124, 767
- Morison, Robert S., McLean, Regina, and Jackson, Elizabeth B. Observations on the relation between ionized and total calcium in normal and abnormal sera and their ultrafiltrates, 122, 439
- Morris, Mark L. See GREEN, MORRIS, CAHILL, and BRAND, 114, 91
- Morrison, Dempsie B., and Hisey, Alan. The carbon monoxide capacity, iron, and total nitrogen of dog hemoglobin, 109, 233
- and —. Preparation and some properties of dried hemoglobin, 114, lxxiii
- and —. The preparation of hemoglobin in a dry and active state, 117, 693
- See WILLIAMS and MORRISON, 119, cv
- and Williams, Edward F., Jr.

- Acid properties of hemin and ferrihemic acid, 123, lxxxvii
- See WILLIAMS and MORRISON, 123, cxxix
- Morse, Minerva, Schlutz, Fred-
eric W., and Hastings, A. Baird. Acidosis as a factor of fatigue in dogs, 105, lxiv
- and —. Some effects of fatigue on the acid-base balance of the blood serum of the normal dog, 109, lxix
- and —. Dehydration as a factor influencing the concentration of serum chloride, base, and protein of the normal dog during exercise, 114, lxxiv
- and —. The influence of kidney excretion upon the concentration of serum chloride and base of the dog during exercise, 119, lxxi
- and —. Effects of brief, vigorous exercise on the electrolyte pattern of the blood serum of the dog, 123, lxxxvii
- Mortimer, B. See RONY, MORTIMER, and IVY, 102, 161
- Mover, Paul. See BOYD and MOVER, 110, 457
- Moxon, Alvin L. See FRANKE and MOXON, 105, 415
- Moyer, Laurence S., and Abels, Julius C. Electrokinetic aspects of surface chemistry. II. Electrokinetic theory in the calculation of the charge of proteins, 121, 331
- Electrokinetic aspects of surface chemistry. III. A

- comparison of the microscopic and moving boundary methods of electrophoresis, 122, 641
- and Abramson, Harold A. Electrokinetic aspects of surface chemistry. V. Electric mobility and titration curves of proteins and their relationship to the calculation of radius and molecular weight, 123, 391
- Mueller, Arthur J. See Cox and MUELLER, 114, xxii
- and Cox, Warren M., Jr. The effect of changes in diet on the volume and composition of rat milk, 119, lxxii
- and —. Rat milk fat as affected by lipids in the diet, 123, lxxxviii
- Müller, Eugen, and Page, Irvine H. The preparation of aliphatic cholesteryl ethers and cholesterilene, 101, 127
- Mueller, J. Howard. Pimelic acid as a growth accessory for the diphtheria bacillus, 119, 121
- . Nicotinic acid as a growth accessory for the diphtheria bacillus, 120, 219
- . The utilization of carnosine by the diphtheria bacillus, 123, 421
- Mull, James W. See Bowman, VISSCHER, and MULL, 109, xi
- Munch, R. H. See Sidwell, MUNCH, BARRON, and HOGNESS, 123, 335
- Munday, Betty. See Seibert and MUNDAY, 101, 763
- Munford, Samuel A. See Hubbard, Munford, and Tyner, 101, 781
- Munro, Muriel Platt. See Woodward, Munro, and Schroeder, 109, 11
- . See Schroeder, Munro, and Weil, 110, 181
- Muntwyler, Edward. See Myers, Muntwyler, Binns, and Danielson, 102, 19
- . See Bowman and Muntwyler, 114, xiv
- . See Pillemmer, Ecker, Myers, and Muntwyler, 123, 365
- Murlin, John R. See Pierce, Nasset, and Murlin, 108, 239
- Murphy, Elizabeth A. See Evans, Lepkovsky, and Murphy, 106, 431, 441, 445
107, 429, 439, 443
- . See Evans, Murphy, Archibald, and Cornish, 108, 515
- Murray, Ronald B. See Boyd and Murray, 117, 629
- Murray, Sheila. See Deuel, Hallman, Butts, and Murray, 116, 621
- . See Deuel, Butts, Blunden, Cutler, and Knott, 117, 119
- . See Deuel, Hallman, and Murray, 119, 257, xxii
- . See Deuel, Hallman, Murray, and Samuels, 119, 607
- . See Deuel, Butts, Hallman, Murray, and Blunden, 119, 617

Murray, Sheila—*continued*

- See DEUEL, MURRAY, HALLMAN, and TYLER, 120, 277
- See DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN, 123, 257
- See DEUEL, HALLMAN, and MURRAY, 123, xxix 124, 385
- See DEUEL, HALLMAN, MURRAY, and HILLIARD, 125, 79
- Murrell, Florence C.** See WES-SON and MURRELL, 102, 303 105, xcix
- Muskat, Irving E.** See LEVENE and MUSKAT, 105, 431 106, 761
- Musser, Ruth.** See CARR, MUS-SER, SCHMIDT, and KRANTZ, 102, 721
- Musulin, R. R., Woodward, Gladys E., Silverblatt, Ethyl, and King, C. G.** The vitamin C content of tumor tissue, 114, lxxiv
- and King, C. G. Metaphos-phoric acid in the extraction and titration of vitamin C, 116, 409
- Muus, Jytte, Bessey, Otto A., and Hastings, A. Baird.** Effect of lactoflavin and vita-min B₆ deficiency on tissue metabolism, 119, lxxii
- Mydans, W. E.** See CONANT, DERSCH, and MYDANS, 107, 755
- Myers, Charles S.** See KEN-DALL, MASON, MCKENZIE, MYERS, and KOELSCH, 105, xlv
- See KENDALL, MASON, MCKENZIE, and MYERS, 109, p. 1
- See KENDALL, MASON, MYERS, and ALLERS, 114, lvii
- See MASON, MYERS, and KENDALL, 114, 613
- See MASON, MYERS, and KENDALL, 116, 267
- Myers, Victor C.** See EVELETH, BING, and MYERS, 101, 359
- , Muntwyler, Edward, Binns, Dorothy, and Danielson, Wayne H. The colorimetric estimation of the hydrogen ion concentration of blood, 102, 19
- See BING, SAURWEIN, and MYERS, 105, 343
- See BING, HANZAL, and MYERS, 109, viii
- See EVELETH and MYERS, 113, 449, 467
- and Mangun, George. The potassium content of muscle and its possible relation to muscle creatine, 114, lxxv
- See ANDES and MYERS, 118, 137
- See PILLEMER, ECKER, MYERS, and MUNTWYLER, 123, 365
- See MANGUN and MYERS, 123, lxxix

N

- Naiman, Barnet.** See HARROW and NAIMAN, 105, xxxv
- Nash, Thomas P., Jr.** See LAUG and NASH, 108, 479
- Nasset, E. S.** See PIERCE, NASSET, and MURLIN, 108, 239

- Natelson, Samuel, Sobel, Albert E., and Kramer, Benjamin. Salts of ergosteryl sulfate: preparation and antirachitic activity on irradiation in aqueous medium, 105, 761
 — and —. A new method for the separation of sterols from vitamin D-containing materials, 109, 687
 —. See DREKTER, SOBEL, and NATELSON, 114, xxviii
 —. See SOBEL, DREKTER, and NATELSON, 114, xcvi
 115, 381
 —. See DREKTER, SOBEL, and NATELSON, 115, 391
 Neale, Sarah. See COX, 103, 777
 Neglia, F. J., Hess, W. C., and Sullivan, M. X. The cystine content of acid- and alkali-prepared glutenin, 125, 183
 Nelson, C. Ferdinand, and Stoker, Ruth. The hemoglobin concentration and red cell count of healthy men, 114, lxxvi
 Nelson, E. K. See MARKLEY, NELSON, and SHERMAN, 118, 433
 Nelson, E. M. See KLINE, TOLLE, and NELSON, 123, lxix
 Nelson, J. M. See LUTZ and NELSON, 107, 169
 —. See SAUL and NELSON, 111, 95
 —. See GRAUBARD and NELSON, 111, 757
 112, 135
 —. See WAGREICH and NELSON, 115, 459
 Nelson, John W. See CARTLAND and NELSON, 119, 59
 Nelson, Norton. See ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN, 114, lxxxiv
 Nelson, Victor E. See KEIL and NELSON, 106, 343
 Neurath, Hans, and Bull, Henry B. The denaturation and hydration of proteins. I, 115, 519
 —. See BULL and NEURATH, 118, 163
 125, 113
 Neuwirth, Isaac. Fluctuations of the blood sugar *in vitro*, 104, 129
 —. Sugar content of heparinized and oxalated plasmas, 120, 463
 Newburgh, L. H. See JOHNSTON and NEWBURGH, 109, xlv
 119, liv
 Newman, Ethel S. See FERRY, COHN, and NEWMAN, 109, xxxii
 114, xxxiv
 Newman, M. S. See ANDERSON and NEWMAN, 101, 499, 773
 — and Anderson, R. J. The chemistry of the lipids of yeast. I. The composition of the acetone-soluble fat, 102, 219
 — and —. II. The composition of the phospholipids, 102, 229
 —. See ANDERSON and NEWMAN, 103, 197, 405
 —, Crowder, J. A., and Anderson, R. J. The chemistry of the lipids of tubercle bacilli.

Newman, M. S.—*continued*

XXXVIII. A new synthesis of phthiocol, the pigment of the human tubercle bacillus,

105, 279

— See ANDERSON, CROWDER, NEWMAN, and STODOLA,

113, 637

114, iii

— See FIESER and NEWMAN,

114, 705

Newton, Edith R. See CORLEY, TRIPP, and NEWTON,

109, xxiii

Newton, Eleanor B. A chromogenic tungstate and its use in the determination of the uric acid of blood,

120, 315

Newton, Joseph K. See MATTHEWS, NEWTON, and BLOOR,

108, 145

Ney, Luman F., and West, Edward S. A potentiometric adaptation of the Shaffer-Hartmann sugar method,

114, 547

— See WEST and NEY,

119, cii

Nice, Margaret. Urea clearance during normal pregnancy,

109, lxix

Nielsen, Ernest K. See CORLEY, WOLF, and NIELSEN,

123, xxvi

Niemann, Carl, Schoeffel, Eugene, and Link, Karl Paul. Substituted hydrazine derivatives of the hexuronic acids. Phenylhydrazine and *p*-bromophenylhydrazine derivatives of *d*-galacturonic acid and *p*-bro-

mophenylhydrazine derivatives of *d*-mannuronic acid,

101, 337

—, Karjala, Sulo, and Link, Karl Paul. Synthesis of the hexuronic acids. III. The synthesis of *dl*-alluronic acid from allomucic acid,

104, 189

— and Link, Karl Paul. Synthesis of the hexuronic acids. IV. The synthesis of *d*-galacturonic acid from *d*-galactose,

104, 195

— and —. The composition of an aldobionic acid from flaxseed mucilage,

104, 205

—, McCubbin, Robert J., and Link, Karl Paul. Synthesis of the hexuronic acids. V. The synthesis of *l*-mannuronic acid from *l*-mannosaccharic acid,

104, 737

— and Link, Karl Paul. Synthesis of the hexuronic acids. VI. The synthesis of *l*-galacturonic acid from *l*-galactose,

104, 743

— and —. VII. The synthesis of *l*-glucuronic acid and the resolution of *dl*-galacturonic acid,

106, 773

—, Roberts, R. H., and Link, Karl Paul. The isolation and characterization of a starch polysaccharide from the woody tissue of the apple tree (*Malus malus*),

110, 727

— See BERGMANN and NIEMANN,

115, 77

—, Anderson, Arthur B., and Link, Karl Paul. The isolation and characterization of a starch polysaccharide from the

- leaf tissue of the apple tree
(*Malus malus*), 116, 447
- See BERGMANN and NIE-
MANN, 118, 301, 781
122, 577
- Nimmo, Charles Colvin. See
LUCK and NIMMO, 119, lxxv
- Nims, Leslie Frederick, and
Smith, Paul K. The ioniza-
tion of *dl*-alanine from twenty
to forty-five degrees,
101, 401
- and —. The ionization of
lactic acid from zero to fifty
degrees, 109, lxx
113, 145
- Nixon, Arthur. See SAHYUN,
GOODELL, and NIXON,
117, 685
- Norris, Earl R., and Rao, D. A.
R. Rama. Phosphatases of
marine invertebrates,
108, 783
- Norris, L. C. See GALLUP and
NORRIS, 119, xxxvi
- Northrop, John H. See CAL-
VERY, HERRIOTT, and NORTH-
ROP, 109, xvi
113, 11
- Nugent, R. L., and Towle, L. W.
The specific gravity of syn-
thetic solutions of serum albu-
min and serum globulin,
104, 395
- Nutter, Pauline. See SANDS and
NUTTER, 110, 17
- O
- Oberst, Fred W. The deter-
mination of sodium in human
red blood cells, 108, 153
- and Plass, E. D. Water dis-
tribution in the blood of preg-
nant and non-pregnant women,
109, lxxi
- and Woods, E. B. Studies in
glutathione. II. Relation be-
tween reduced and oxidized
glutathione and the oxygen
content and capacity of blood,
111, 1
- . Studies in glutathione.
III. The disappearance of glu-
tathione added to various solu-
tions and biological fluids,
111, 9
- . The determination of mor-
phine in the urine of drug
addicts, 123, lxxxix
- O'Brien, Brian, McEwen, H.
Douglas, and Morgareidge,
Kenneth. Vitamin D potency
of irradiated milk as a function
of energy input, 119, lxxiii
- O'Brien, Helen. See STADIE and
O'BRIEN, 103, 521
109, lxxxvii
112, 723
117, 439
- Odell, Arthur Duston, and Mar-
rian, Guy Frederic. Some ob-
servations on the constitution
of the "pregnanetriol" occur-
ring in the urine of pregnant
mares, 125, 333
- Okey, Ruth, Gillum, Helen L.,
and Yokela, Edith. Factors
affecting cholesterol deposition
in the tissues of rats. I.
Differences in the liver lipids
of males and females,
107, 207
- and —. The effect of under-
nutrition and of specific vita-

Okey, Ruth—*continued*

- min deficiency on the liver lipids of cholesterol-fed rats, 109, lxxii
- , Godfrey, Lois Stewart, and Gillum, Frances. The effect of pregnancy and lactation on the cholesterol and fatty acids in rat tissues, 124, 489
- Olcott, H. S., and Mattill, H. A. Vitamin E. I. Some chemical and physiological properties, 104, 423
- . Some chemical properties of vitamin E, 105, lxxv
- . Vitamin E. II. Stability of concentrates toward oxidizing and reducing reagents, 107, 471
- . The absorption spectrum and other properties of vitamin E, 109, lxxii
- . Vitamin E. III. Evidence for the presence of a hydroxyl group. The biological utilization of esters. Absorption spectrum, 110, 695
- and Mattill, H. A. Vitamin E and early growth, 114, lxxvii
- . Paralysis in the young of vitamin E-deficient female rats, 119, lxxiv
- Oleson, J. J. See ELVEHJEM, KOEHN, and OLESON, 114, xxxi
115, 707
- . See BIRD and OLESON, 123, xi
- Olmsted, W. H., Curtis, George, and Timm, O. K. Stool volatile fatty acids. IV. The in-

fluence of feeding bran pentosan and fiber to man,

- 108, 645
- . See WILLIAMS and OLMSTED, 108, 653
- Olson, Kenneth B. See CHARGAFF and OLSON, 122, 153
- Oncley, J. L. See FRIEND, FERRY, and ONCLEY, 123, xxxix
- Orcutt, F. S., and SeEVERS, M. H. A method for determining the solubility of gases in pure liquids or solutions by the Van Slyke-Neill manometric apparatus, 117, 501
- and Waters, R. N. A method for the determination of cyclopropane, ethylene, and nitrous oxide in blood with the Van Slyke-Neill manometric apparatus, 117, 509
- Orent, Elsa R., Kruse, H. D., and McCollum, E. V. Studies on magnesium deficiency in animals. VI. Chemical changes in the bone, with associated blood changes, resulting from magnesium deprivation, 106, 573
- . See ITER, ORENT, and MCCOLLUM, 108, 571, 579, 585
- van Ormondt, Johannes. Studies in the physical chemistry of lipopeptides. I, 114, lxxvii
- Orr, J. H. See BOYD, ORR, and REED, 124, 409
- Orten, James M., and Smith, Arthur H. Inorganic salts in nutrition. VIII. Variations in the proportion of reticulo-

- cytes in the blood of rats receiving a diet deficient in inorganic salts, 105, 181
 — and —. Changes in cells and pigment in the blood after realimentation of rats on a low salt ration, 105, lxvi
 — and —. Precursors of endogenous citric acid, 114, lxxviii
 — and —. A study of certain metabolites and related compounds as precursors of endogenous citric acid, 117, 555
 — and —. Rate of citric acid formation following the injection of the sodium salts of certain dicarboxylic acids, 119, lxxiv
 —. The reticulocyte as an index to hematopoiesis in the albino rat, 123, lxxxix
 —. See SMITH and ORTEN, 124, 43
 Osborn, W. O. See McCULLAGH, OSBORN, and OSGARD, 123, lxxxi
 Osburn, O. L., Brown, R. W., and Werkman, C. H. The butyl alcohol-isopropyl alcohol fermentation, 121, 685
 Osgard, Bertha. See McCULLAGH, OSBORN, and OSGARD, 123, lxxxix
 Osgood, Bess. See HOFFMAN and OSGOOD, 123, lviii
 124, 347
 Osheroff, William. See MORGULIS and OSHEROFF, 124, 767
 Otis, Louise. See SMITH and OTIS, 119, xcii
 Ouer, Roy A. See LEPKOVSKY, OUER, and EVANS, 108, 431
 P
 Padis, Kively E. See SHINOHARA and PADIS, 112, 697, 709
 Page, Irvine H. See MÜLLER and PAGE, 101, 127
 —. See VAN SLYKE, PAGE, and KIRK, 102, 635
 —. See KIRK, PAGE, and VAN SLYKE, 105, xlvii
 106, 203
 —, Kirk, Esben, Lewis, William H., Jr., Thompson, William R., and Van Slyke, Donald D. Plasma lipids of normal men at different ages, 111, 613
 —, Farr, Lee E., and Weech, A. A. The effect of prolonged low protein diet on the serum lipids of dogs, 121, 111
 Page, J. W. See BOOHER, BLODGETT, and PAGE, 107, 599
 Painter, E. Page, and Franke, Kurt W. Selenium in proteins from toxic foodstuffs. III. The removal of selenium from toxic protein hydrolysates, 111, 643
 — and —. A comparison between the Benedict-Denis and Parr bomb methods for the determination of total sulfur in plants and proteins, 114, 235
 Palmer, A. H. The preparation of a crystalline globulin from the albumin fraction of cow's milk, 104, 359
 —. See LEVY and PALMER, 123, lxxix

Palmer, A. H.—*continued*

— and Levy, Milton. The dipeptidase of chick embryo extracts, 123, xc

Palmer, John W. See MEYER and PALMER, 107, 629 109, lxxv

— and Meyer, Karl. Estimation of amino sugar, 109, lxxiii

— See MEYER, THOMPSON, PALMER, and KHORAZO, 113, 303

— See MEYER, PALMER, THOMPSON, and KHORAZO, 113, 479

— See MEYER and PALMER, 114, lxxviii, lxxix, 689

— See MEYER, SMYTH, and PALMER, 119, 73, lxxix

—, Smyth, Elizabeth M., and Meyer, Karl. On glycoproteins. IV. The estimation of hexosamine, 119, 491

— See MEYER, PALMER, and SMYTH, 119, 501

Palmer, Leroy S. See MASON and PALMER, 107, 131

— Biological assay of vitamin E; application to wheat germ and wheat germ oil, 119, lxxv

Palmer, Walter W. See HEIDELBERGER and PALMER, 101, 433

— See FOSTER, PALMER, and LELAND, 115, 467

—, Leland, Jessica P., and Gutman, Alexander B. The microdetermination of thyroxine in the thyroid gland of the new-born, 125, 615

Pangborn, Mary C., and Anderson, R. J. The chemistry of

the lipids of tubercle bacilli. XXXII. Isolation of trehalose from the timothy-grass bacillus, 101, 105

— See WADSWORTH and PANGBORN, 116, 423

Papageorge, Evangeline, and Lewis, Howard B. Experimental alcaptonuria in the white rat, 119, lxxvi

— and —. Comparative studies of the metabolism of the amino acids. VII. Experimental alcaptonuria in the white rat, 123, 211

Pappenheimer, Alwin M. See GOETTSCHE and PAPPENHEIMER, 114, xl, 673

Pappenheimer, Alwin M., Jr. Diphtheria toxin. I. Isolation and characterization of a toxic protein from *Corynebacterium diphtheriae* filtrates, 120, 543

— II. The action of ketene and formaldehyde, 125, 201

Paquin, Felix, Jr. See HENDRIX and PAQUIN, 114, xlix

— and Anderson, William E. Factors influencing the distribution and character of adipose tissue in the rat. III. The effect of thyroglobulin and of thyroxine, 114, lxxix

— See HENDRIX and PAQUIN, 124, 135

Parsons, Helen T. See LEASE and PARSONS, 105, p. 1

—, Janssen, Pearl, and Schoenleber, Florence. The effect on the toxicity of egg white of digestion with papain, 105, lxxvii

- . See LEASE, KELLY, and PARSONS, 114, lxi
- . A comparison of the antitryptic activity of egg white with its capacity to produce a characteristic nutritional disorder, 116, 685
- , Lease, Jane G., and Johnson, Doris. The storage in the body organs of the factor protective against the injury due to dietary egg white, 119, lxxvii
- and Johnson, Doris. New evidence that cooking egg white removes a harmful factor rather than creates a protective factor, 123, xci
- Patras, Mary C. See TWEEDY, McNAMARA, TEMPLETON, and PATRAS, 119, xcix
- Patterson, Wilbur I. See DU VIGNEAUD, DYER, JONES, and PATTERSON, 106, 401
- . See DU VIGNEAUD and PATTERSON, 109, 97
- and du Vigneaud, Vincent. The synthesis of homocystine, 111, 393
- . See DU VIGNEAUD and PATTERSON, 114, 533
- , Dyer, Helen M., and du Vigneaud, Vincent. The synthesis of di-N-methylhomocystine and N-methylmethionine and a study of their growth-promoting ability in connection with a cystine-deficient diet, 116, 277
- and du Vigneaud, Vincent. The synthesis of tetradeutero-homocystine and dideutero-methionine, 123, 327
- Patton, A. R. The determination of glycine in proteins, 108, 267
- Paul, Henry. See HELLER and PAUL, 105, 655
- . See HELLER, PAUL, and THOMPSON, 106, 357
- . See McCAY, TUNISON, CROWELL, and PAUL, 114, 259
- Paul, W. D., and Gibson, R. B. A case of diabetes mellitus with remissions, autogenous hypoglycemia, and tolerance for low blood sugar, 123, xci
- Paxson, Newlin F. See HEPBURN, PAXSON, and ROGERS, 123, liv
- Pearl, Aaron. See SOBEL, PEARL, and KRAMER, 114, xcvi
- . See SOBEL, PEARL, GERCHICK, and KRAMER, 118, 47
- Pearson, Olof H. See SALTER and PEARSON, 112, 579
- . The reaction of cyanide with the hemocyanin of *Limulus polyphemus*, 115, 171
- Pearson, P. B. Inorganic phosphorus of horse serum. The effect of age and nutrition, 106, 1
- , Elvehjem, C. A., and Hart, E. B. The relation of protein to hemoglobin building, 119, 749
- Pedlow, J. T. See REINER, SMYTHE, and PEDLOW, 113, 75

- Pennington, W. D.** See **JENSEN**, **EVANS**, **PENNINGTON**, and **SCHOCK**, 109, xlv
114, 199
- Perkins, Marie E.** See **HELLERMAN** and **PERKINS**, 107, 241
112, 175
- See **STOCK**, **PERKINS**, and **HELLERMAN**, 125, 753
- Perla, David.** See **SANDBERG** and **PERLA**, 113, 35
- Perlman, I., Ruben, S., and Chaikoff, I. L.** Radioactive phosphorus as an indicator of phospholipid metabolism. I. The rate of formation and destruction of phospholipids in the fasting rat, 122, 169
- See **FRIES**, **RUBEN**, **PERLMAN**, and **CHAIKOFF**, 123, 587
- See **ENTENMAN**, **RUBEN**, **PERLMAN**, **LORENZ**, and **CHAIKOFF**, 124, 795
- Perlzweig, William A., Kondritzer, Albert A., and Bruch, Ernst.** The solubility precipitation patterns of the serum proteins, 123, xcii
- Peters, Gustavus A., and Martin, Hugh E.** The influence of temperature upon the vitamin C content of dog adrenals after death, 124, 249
- Peters, John P.** See **MAN** and **PETERS**, 101, 685
- and **Man, Evelyn B.** Lipoid-chlorine in serum, 107, 23
- See **EISENMAN**, **MACKENZIE**, and **PETERS**, 116, 33
- See **EISENMAN**, **HALD**, and **PETERS**, 118, 289
- Peterson, D. H., Gallagher, T. F., and Koch, F. C.** The effect of acid hydrolysis on the yield of androgenic and estrogenic activities from human urine, 119, 185
- , —, and —. The effect of acid hydrolysis on the yield of androgenic activity from human urine, 119, lxxvii
- , **Hoskins, W. H., Coffman, J. R., and Koch, F. C.** The nature of the physiologically inactive form of androgens in human urine, 123, xciii
- Peterson, Ruth D.** See **POWER**, **WAKEFIELD**, and **PETERSON**, 105, lxxvii
- Peterson, V. E.** See **GRAHAM**, **PETERSON**, **HOUCHIN**, and **TURNER**, 122, 275
- Peterson, W. H.** See **JOHNSON**, **PETERSON**, and **FRED**, 101, 145
- See **JOHNSON** and **PETERSON**, 112, 25
- See **WOOLLEY** and **PETERSON**, 114, 85
- See **JOHNSON**, **JOHNSON**, and **PETERSON**, 116, 515
- See **BERGER**, **JOHNSON**, and **PETERSON**, 117, 429
- See **WOOLLEY** and **PETERSON**, 118, 363
119, cvii
121, 507
122, 207, 213
- See **CHRISTENSEN**, **PETERSON**, and **JOHNSON**, 123, xxi
- See **QUACKENBUSH**, **STEENBOCK**, and **PETERSON**, 123, xcvi
- See **BERGER**, **JOHNSON**, and **PETERSON**, 124, 395

- Peugnet, Hubert B. See URBAN and PEUGNET, 119, c
- Pfiffner, J. J., Swingle, W. W., and Vars, Harry M. The cortical hormone requirement of the adrenalectomized dog, with special reference to a method of assay, 104, 701
- See WINTERSTEINER, VARS, and PFIFFNER, 105, c
- , Vars, Harry M., and Taylor, A. R. Extraction studies on the adrenal cortical hormone. I. Methods of preparation, 106, 625
- See VARS, TAYLOR, and PFIFFNER, 106, 639
- and Vars, Harry M. Extraction studies on the adrenal cortical hormone. III. Distribution studies, 106, 645
- See WINTERSTEINER and PFIFFNER, 109, c
- , Wintersteiner, Oskar, and Vars, Harry M. Chemical studies on the adrenal cortex. I. Fractionation studies on hormone concentrates, 111, 585
- See WINTERSTEINER and PFIFFNER, 111, 599
- and Wintersteiner, Oskar. Chemical investigations on the cortical hormone of the adrenal gland, 114, lxxx
- See WINTERSTEINER and PFIFFNER, 116, 291
- Phillips, Max, and Goss, M. J. The chemistry of lignin. X. Lignin from oat straw, 114, 557
- and —. XI. Lignin from wheat straw, 125, 241
- Phillips, Paul H., and Stare, F. J. The distribution of a reducing substance (vitamin C) in the tissues of fluorine-fed cows, 104, 351
- , Hart, E. B., and Bohstedt, G. The influence of fluorine ingestion upon the nutritional qualities of milk, 105, 123
- and Chang, Chang Y. The influence of chronic fluorosis upon vitamin C in certain organs of the rat, 105, 405
- , Stare, F. J., and Elvehjem, C. A. A study of tissue respiration and certain reducing substances in chronic fluorosis and scurvy in the guinea pig, 106, 41
- and Hart, E. B. The effect of organic dietary constituents upon chronic fluorine toxicosis in the rat, 109, 657
- Phillips, Sammie. See JONES, GERSDORFF, and PHILLIPS, 122, 745
- Picha, V. See McCULLAGH and PICHA, 105, lix
- See McCULLAGH, 107, 35
- Pierce, H. B., Nasset, E. S., and Murlin, John R. Enzyme production in a transplanted loop of the upper jejunum, 108, 239
- , Haege, Lorraine, and Froeschle, Paul F. The determination of the rate of emptying of the rat stomach following intragastric administration of glucose solutions, 119, lxxviii

Pierce, H. B.—*continued*

— and —. The rate of carbohydrate absorption from the rat intestine, 123, xciii

— and Hartman, Ernest. Blood chemistry in human trichinosis, 123, xciv

Pierce, J. A., and Montgomery, Hugh. A microquinhydrone electrode: its application to the determination of the pH of glomerular urine of *Necturus*, 110, 763

—. The application of the microquinhydrone electrode to the determination of the pH of the aqueous humor of rachitic and normal rats, 111, 501

—. A capillary, non-penetrating microquinhydrone electrode, 117, 651

—. The reaction of the epiphyseal cartilage in normal and rachitic rats, 124, 115

Pierose, Perry N. See BUTTS, CUTLER, and DEUEL, 105, 45

Pigott, Madeleine G. See HOLMES, PIGOTT, and CAMPBELL, 103, 657

105, xli

Pillemer, L. See ECKER, PILLEMER, MARTIENSEN, and WERTHEIMER, 123, 351, 359

—, Ecker, E. E., Myers, Victor C., and Muntwyler, Edward. Chemical and immunological studies of the effects of radiant energy and of oxidation on crystalline urease, 123, 365

Pillsbury, Donald M., and Kul-

char, George V. The use of the Hagedorn-Jensen method in the determination of skin glucose, 106, 351

Pincus, Gregory, Wheeler, Grace, Young, Genevieve, and Zahl, P. A. The colorimetric determination of urinary estrin, 116, 253

Pizzolato, Philip. See BEARD, BOGGESS, and PIZZOLATO, 119, ix

—. See BEARD and PIZZOLATO, 123, vii

Plass, E. D. See OBERST and PLASS, 109, lxxi

Platt, Muriel E. See SCHROEDER, WOODWARD, and PLATT, 101, 133

— and Schroeder, E. F. Glyoxalase. I. The applicability of the manometric method to the study of glyoxalase, 104, 281

— and —. II. The distribution of glyoxalase in tissues of normal and cancerous albino rats, 106, 179

Plazin, John. See VAN SLYKE and HILLER, 102, 499

Poe, Charles F., and Klemme, Dorothea E. A biochemical study of the fermentation of rare sugars by members of the colon and aerogenes groups of bacteria. II. Cellobiose, 109, 43

Poindexter, Charles A. See BRUGER and POINDEXTER, 101, 21

Pomerene, Elizabeth. See DOMINGUEZ and POMERENE, 104, 449

- Poo, L. J. See ADDIS, POO, LEW, and YUEN, 113, 497
- See ADDIS, POO, and LEW, 115, 111, 117 116, 343
- See ADDIS, KARNOFSKY, LEW, and POO, 124, 33
- Popper, William, Jr. See LEFKOVSKY, POPPER, and EVANS, 108, 257 109, liv
- Post, Anna L. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, 103, 93
- Potter, Kathryn Sue. See JOHNSTIN and POTTER, 110, 279
- Potter, V. R., and Elvehjem, C. A. A modified method for the study of tissue oxidations, 114, 495
- and —. The effect of inhibitors on succinoxidase, 117, 341
- See BOYDEN and POTTER, 122, 285
- See LIPSCHITZ, POTTER, and ELVEHJEM, 123, 267 124, 147
- Power, Francis W. See AMBROSE, POWER, and SHERWIN, 101, 669
- Power, Marschelle H., Wakefield, E. G., and Peterson, Ruth D. The microdetermination of ethereal sulfate in blood serum, 105, lxxvii
- and Keith, Norman M. Experiments on the distribution and renal excretion of sucrose injected intravenously in dogs, 114, lxxx
- A volumetric method for the determination of acacia in serum, lymph, and urine, 119, lxxviii
- and Wakefield, E. G. A volumetric benzidine method for the determination of inorganic and ethereal sulfate in serum, 123, 665
- , Wilder, Russell M., and Cutler, Hayden H. The concentrations of sodium, potassium, and chloride in plasma and urine during short periods of low sodium and elevated potassium intake, 123, xciv
- Powers, Harry H., and Reis, Frederick. The effect of insulin in amino acid and urea nitrogen in laked and unlaked blood, 101, 523
- Prebluda, H. J., and McCollum, E. V. A chemical reagent for the detection and estimation of vitamin B₁, 119, lxxix
- Preisler, Paul W., and Hempelman, Louis H. Oxidation-reduction potentials of N-methyl- β -oxyphenazine (isomer of pyocyanine) and related substances, 114, lxxxii
- , Hill, Edgar S., Ronzoni, Ethel, and Young, Leslie. The oxidation-reduction potentials of the oxidation products of inositol, 123, xcvi
- Present, Clara H. See RUBIN, PRESENT, and RALLI, 121, 19
- Presnell, A. K. The relation of vitamin D to skin respiration, 121, 5

- Price, J. Waide. See ROBINSON, PRICE, and CULLEN, 106, 7
109, lxxiv
114, 321
- . See ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN, 114, lxxxiv
- . See ROBINSON, PRICE, and HOGDEN, 119, lxxxiii
120, 481
- , Robinson, Howard W., and Hogden, Corinne G. The estimation of albumin and globulin in blood serum. II. Separation of fractions by centrifugation with the angle centrifuge, 123, xcvi
- Price, W. H. See GAEBLER and PRICE, 114, xxxix
121, 497
- Pucher, George W., Vickery, Hubert Bradford, and Wakeman, Alfred J. Determination of the acids of plant tissue. IV. A new method for the determination of malic acid, 105, lxviii
- . See VICKERY, PUCHER, and CLARK, 109, 39
- . See VICKERY and PUCHER, 113, 157
- , Sherman, Caroline C., and Vickery, Hubert Bradford. A method to determine small amounts of citric acid in biological material, 113, 235
- , Clark, Harold E., and Vickery, Hubert Bradford. The organic acids of rhubarb (*Rheum hybridum*). I. On the malic acid of rhubarb, with a note on the malic acid of tobacco leaves, 117, 599
- , —, and —. II. The organic acid composition of the leaves, 117, 605
- . See VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH, 119, 369
- , Wakeman, Alfred J., and Vickery, Hubert Bradford. The metabolism of the organic acids of the tobacco leaf during culture, 119, 523
- , Curtis, Lawrence C., and Vickery, Hubert Bradford. The red pigment of the root of the beet (*Beta vulgaris*). I. The preparation of betanin, 123, 61
- , —, and —. II. A method to determine betanin, 123, 71
- . See VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN, 125, 527
- Pugsley, L. I. The vitamin A and D content of halibut and sable-fish visceral oil, 123, xcvi
- Pursell, Lee. See HELLER and PURSELL, 118, 549
119, xlv
- Pyle, James J., Fisher, John H., and Clark, R. H. The effect of certain physiologically important materials upon kidney phosphatase, 119, 283
- Q
- Quackenbush, F. W., and Steenbock, H. Acrodynia and the essential fatty acids, 123, xcvi

- , —, and Peterson, W. H. The effects of acids upon carotenoids, 123, xcvi
- Quastel, H. J., and Wheatley, A. H. M. Observations on anaerobic glycolysis in brain, 119, lxxx
- Quick, Armand J. The relationship between chemical structure and physiological response. IV. Conjugation of salicylic acid with glycine and its action on uric acid excretion, 101, 475
- The relationship of uric acid excretion to ketosis, lactic acid metabolism, and aromatic acids, 105, lxix
- The prothrombin in hemophilia and in obstructive jaundice, 109, lxxiii
- The effect of exercise on the excretion of uric acid. With a note on the influence of benzoic acid on uric acid elimination in liver diseases, 110, 107
- The coagulation defect in peptone shock and in sweet clover disease, 114, lxxxii
- The relation of the antithrombogens, heparin and calomine-fast pink, to the antithrombin normally occurring in blood, 119, lxxx
- and Leu, Madeline. Quantitative determination of prothrombin, 119, lxxx
- Qualitative differences in the prothrombin, thromboplastin, and thrombin of different species, 123, xcix

- Quinn, E. J. See BESSEY, KING, QUINN, and SHERMAN, 111, 115

R

- Rabinowitch, I. M., Dingwall, Andrew, and Mackay, F. H. Studies on cerebrospinal fluid. I. Chemical and spectrographic detection of lead, 103, 707
- , —, and —. II. The occurrence of lead in cerebrospinal fluid, 103, 725
- See ROSS and RABINOWITCH, 111, 803
- Clinical and metabolic studies of the Eskimo, 114, lxxxii
- Raby, E. C. See BARTHOLOMEW and RABY, 113, 655
- Raiziss, George W., Severac, M., Moetsch, J. C., and Clemence, Leroy W. Therapeutic effect of diaminodiphenyl sulfide, diaminodiphenyl sulfone, and related compounds in the treatment of mice infected with *β-Streptococcus hæmolyticus*, 123, xcix
- Rakieten, Nathan. See HIMWICH, GILDEA, RAKIETEN, and DuBOIS, 113, 383
- Ralli, Elaine P. See RUBIN, PRESENT, and RALLI, 121, 19
- Randall, E. L. See CHRISTMAN and RANDALL, 102, 595
- Randall, Lowell O. Chemical topography of the brain, 123, c
- 124, 481

Randall, Lowell O.—*continued*

— Changes in lipid composition of nerves from arteriosclerotic and diabetic subjects, 125, 723

Rao, D. A. R. Rama. See NORRIS and RAO, 108, 783

Rapoport, S. See GUEST and RAPOPORT, 123, xlvii
124, 599

Rappaport, Friedrich, and Köck-Molnar, Klara. An improvement in the Van Slyke method for blood gas analysis, 104, 29

Ratner, S. See SCHOENHEIMER, FOSTER, RITTENBERG, and RATNER, 123, cv

Ravdin, I. S. See RIEGEL, RAVDIN, and ROSE, 120, 523

Ravin, A. Colorimetric determination of acetone by the salicylaldehyde method, 115, 511

Ray, G. B., and Blair, H. A. The effect of varying concentrations of oxyhemoglobin on its light absorption, 111, 371

Ray, Thomas W. A microchemical study of human biliary calculi, 111, 689

Raymond, Albert L. See LEVENE and RAYMOND, 102, 317, 331, 347

— and Levene, P. A. Thio sugars, 105, lxx

— See LEVENE and RAYMOND, 107, 75

— Thio sugars, 107, 85

— Hexosemonophosphates. Glucose-4-phosphate, 113, 375

Razek, Joseph. See SUNDERMAN and RAZEK, 114, civ
118, 397

Read, Lee S. See DUNN, ROSS, and READ, 103, 579

— See CHAIKOFF, LARSON, and READ, 109, 395

Record, P. R. See BETHKE, RECORD, and WILDER, 112, 231

Redemann, C. E. See DUNN, REDEMANN, and SMITH, 104, 511

— See DUNN, SMART, REDEMANN, and SMITH, 105, xxiii

Reder, Ruth. See GALLUP and REDER, 109, xxxvi

Reed, G. B. See BOYD, ORR, and REED, 124, 409

Reed, Howard S., and Dufrenoy, Jean. Histochemical analysis of plant tissues for iron and zinc by a combination microincineration and microanalysis, 105, lxx

Rees, Francis M. See BRAUN and REES, 114, 415

Reeves, E. B. See WEECH, REEVES, and GOETTSCH, 113, 167

Reeves, Richard E., and Anderson, R. J. The chemistry of the lipids of tubercle bacilli. XLVIII. The occurrence of phthiocerol in the wax from various strains of the human tubercle bacillus, 119, 535

— and —. XLIX. The colorimetric determination of phthiocol, 119, 543

— See ANDERSON, REEVES, and STODOLA, 121, 649

- . See ANDERSON, REEVES, and CROWDER, 121, 669
- . See GOEBEL and REEVES, 123, xlii
124, 207
- Reichel, Max.** See THANNHAUSER and REICHEL, 113, 311
- . See THANNHAUSER, REICHEL and GRATTAN, 121, 697
- . See THANNHAUSER, REICHEL, GRATTAN, and MADDOCK, 121, 709, 715, 721, 727
124, 631
- Reiner, L., Smythe, C. V., and Pedlow, J. T.** On the glucose metabolism of trypanosomes (*Trypanosoma equiperdum* and *Trypanosoma lewisi*), 113, 75
- Reiner, Miriam.** See SOBOTKA, REINER, and WEINER, 123, cxii
- Reinhold, John G.** The nature of blood sterol. Evidence obtained by a study of the Liebermann-Burchard reaction, 105, lxxi
- . See LETONOFF and REINHOLD, 114, 147
- and Letonoff, T. V. A fermentable, zinc-precipitable reducing substance in blood in diabetic coma, 114, lxxxiii
- Reis, Frederick.** See POWERS and REIS, 101, 523
- Reiser, Raymond.** The lipid analysis of human thoracic duct lymph, 120, 625
- and HANES, Frederic M. The effect of phospholipid ingestion upon the respiratory quotient in man, 123, ci
- Reisinger, John A.** See WALKER and REISINGER, 101, 223
- Remington, Roe E., and Lassek, Arthur M.** The response of goitrous rats to iodide administration, 119, lxxxii
- Remp, Donald G.** See BING, BENES, and REMP, 114, x
- Renshaw, R. R., and Hotchkiss, H. T., Jr.** Basis for the physiological activity of onium compounds. XIII. Betaine amides, 103, 183
- and Armstrong, W. D. Basis for the physiological activity of onium compounds. XIV. Aryl ethers of choline. I, 103, 187
- Resnik, H., Jr.** See MASON, RESNIK, and HARRISON, 109, lix
- Rheinberger, Margaret B.** The nitrogen partition in the urine of various Primates, 115, 343
- Rice, Carl O.** See CAVETT, RICE, and MCCLENDON, 109, xvii
110, 673
- . See MCCLENDON and RICE, 123, lxxxii
- Richards, A. N., Bordley, James, 3rd, and Walker, Arthur M.** Quantitative studies of the composition of glomerular urine. VII. Manipulative technique of capillary tube colorimetry, 101, 179
- . See BORDLEY and RICHARDS, 101, 193
- . See BORDLEY, HENDRIX, and RICHARDS, 101, 255

Richards, A. N.—*continued*

- See WESTFALL, FINDLEY, and RICHARDS, 107, 661
- See HENDRIX, WESTFALL, and RICHARDS, 116, 735
- , Westfall, B. B., and Bott, P. A. Inulin and creatinine clearances in dogs, with notes on some late effects of uranium poisoning, 116, 749
- Richards, Leah. See DOWNES and RICHARDS, 110, 81
- Richards, Llewellyn. See ANDERSON, SEIGLE, KRZNARICH, RICHARDS, and MARTENY, 121, 165
- Richards, Marianna M. The effect of glycine upon the activity coefficient of glycine, egg albumin, and carboxyhemoglobin, 122, 727
- Richards, Oscar W. The stimulation of yeast proliferation by pantothenic acid, 113, 531
- Richardson, Luther R. See HOGAN and RICHARDSON, 109, xliii
- See HOGAN, RICHARDSON, and JOHNSON, 119, p. 1
- Richman, Eudice. See LEVINE and RICHMAN, 101, 373
- Riddle, Oscar. See BATES and RIDDLE, 123, v
- Ridout, Jessie H. See BEST and RIDOUT, 114, ix
- See BARRETT, BEST, and RIDOUT, 123, iii
- Riegel, Byron, and du Vigneaud, Vincent. The isolation of homocysteine and its conversion to a thiolactone, 112, 149

- Riegel, Cecilia, and Rose, Henry J. Determination of free and combined cholesterol in bile, 113, 117
- , Ravdin, I. S., and Rose, Henry J. Effect of bile with and without cholesterol esters on esterification of cholesterol in blood plasma, 120, 523
- Riemenschneider, R. W., and Ellis, N. R. The component fatty acids of goat milk fat, 113, 219
- and —. The effect of ingested cottonseed meal upon the distribution of the constituent fatty acids of goat milk, 114, 441
- See SPADOLA and RIEMENSCHNEIDER, 121, 787
- Riising, Blanche M. See BAUMANN, RIISING, and STEENBOCK, 107, 705
- Risser, William. See CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER, 123, xx
- Rist, Carl E. See HILBERT and RIST, 117, 371
- Ritchie, Walter S. See HOGAN and RITCHIE, 105, xxxix
- , 107, 179
- See HOGAN, GUERRANT, and RITCHIE, 115, 659
- Rittenberg, D. See SCHOENHEIMER and RITTENBERG, 111, 163
- and Schoenheimer, Rudolf. Deuterium as an indicator in the study of intermediary metabolism. II. Methods, 111, 169

- See SCHOENHEIMER and RITTENBERG, 111, 175
- See SCHOENHEIMER, RITTENBERG, and GRAFF, 111, 183
- See SCHOENHEIMER and RITTENBERG, 113, 505
114, lxxxvii, 381
- See SCHOENHEIMER, RITTENBERG, BERG, and ROUSSELOT, 115, 635
- and Schoenheimer, Rudolf. Deuterium as an indicator in the study of intermediary metabolism. VIII. Hydrogenation of fatty acids in the animal organism, 117, 485
- See EVANS and RITTENBERG, 119, xxxi
- The biological synthesis of cholesterol as studied with the use of deuterium, 119, lxxxiii
- See SCHOENHEIMER and RITTENBERG, 120, 155
- , Schoenheimer, Rudolf, and Evans, E. A., Jr. Deuterium as an indicator in the study of intermediary metabolism. X. The metabolism of butyric and caproic acids, 120, 503
- and —. Deuterium as an indicator in the study of intermediary metabolism. XI. Further studies on the biological uptake of deuterium into organic substances, with special reference to fat and cholesterol formation, 121, 235
- See KESTON, RITTENBERG, and SCHOENHEIMER, 122, 227
- See KESTON and RITTENBERG, 123, lxviii
- , Foster, G. L., and Schoenheimer, Rudolf. Biological studies on amino acids with the aid of deuterium as an indicator, 123, cii
- See SCHOENHEIMER, FOSTER, RITTENBERG, and RATNER, 123, cv
- See FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER, 124, 159
- , Keston, Albert S., Schoenheimer, Rudolf, and Foster, G. L. Deuterium as an indicator in the study of intermediary metabolism. XIII. The stability of hydrogen in amino acids, 125, 1
- See FOSTER, RITTENBERG, and SCHOENHEIMER, 125, 13
- See VAN HEYNINGEN, RITTENBERG, and SCHOENHEIMER, 125, 495
- Robbins, Benjamin H., and Lamson, Paul D. Further studies on the proteolytic enzyme content of latex from the fig and related trees, 106, 725
- Roberts, E. The effect of cysteine on hereditary hypotrichosis in the rat (*Mus norvegicus*), 118, 627
- Roberts, R. H. See NIEMANN, ROBERTS, and LINK, 110, 727
- Roberts, Richard G., Tweedy, Wilbur R., and Smullen, George H. Some reactions of ammonolyzed parathyroid hormone, 112, 209

- Roberts, Richard G.—*continued*
 — and Horvitz, Herman J. The effect of ammonolyzed foods on the growth of albino rats, 123, cii
- Roberts, Willard L., and Link, Karl Paul. A precise method for the determination of coumarin, melilotic acid, and coumaric acid in plant tissue, 119, 269
- Robinson, C. S. See DUNCAN, HUFFMAN, and ROBINSON, 108, 35
- . The hydrogen ion concentration of the contents of the small intestine, 108, 403
- Robinson, E. J. See HEGNAUER and ROBINSON, 116, 769
- and Hegnauer, A. H. The water and electrolyte distribution between plasma and red blood cells following intraperitoneal injections of isotonic glucose, 116, 779
- Robinson, Howard W., Price, J. Waide, and Cullen, Glenn E. Studies of the acid-base condition of blood. III. The value of pK' in the Henderson-Hasselbalch equation for human and dog sera, determined with the Simms electrode, 106, 7
- , —, and —. Studies on the acid-base condition of blood. V. The influence of protein concentration on the colorimetric pH determination of blood serum, 109, lxxiv
 114, 321
- , —, Hogden, Corinne G., Nelson, Norton, and Cullen, Glenn E. Studies on the acid-base condition of blood. VI. The changes in color and absorption curves of a phosphate buffer-phenol red solution on the addition of blood serum of various species, 114, lxxxiv
- , —, and —. The estimation of albumin and globulin in blood serum. I. A study of the errors involved in the filtration procedure, 119, lxxxiii
 120, 481
- . See PRICE, ROBINSON, and HOGDEN, 123, xcvi
- Robinson, S. See DILL, EDWARDS, and ROBINSON, 123, xxx
- Robschait-Robbins, Frieda S. See DAFT, ROBSCHAIT-ROBBINS, and WHIPPLE, 103, 495
 108, 487
 113, 391
 121, 45
 123, 87
- Robson, George M. See FITZHUGH, ROBSON, and DRABKIN, 103, 617
- Rodney, Gertrude, and Garner, R. L. The oxidative deamination of some structurally related aminopropionic acids by the liver and kidney tissues of the rat, 125, 209
- Roe, Joseph H., Gilman, Alfred, and Cowgill, George R. The effect of the ingestion of galactose upon the respiratory quotient of normal and depancreatized dogs, 105, lxxii
- . A colorimetric method for

- the determination of fructose in blood and urine, 107, 15
- A colorimetric method for the determination of ascorbic acid and a comparison of results obtained by this procedure and the dichlorophenol indophenol titration method, 109, lxxv
- and Hudson, C. S. The utilization of *d*-mannoheptulose (*d*-mannoketoheptose) by adult rabbits, 112, 443
- The determination of ascorbic acid as furfural and a comparison of results obtained by this method and by indophenol titration, 116, 609
- Further studies of the metabolism of heptoses, 119, lxxxiv
- and Hudson, C. S. Further studies of the physiological availability of heptoses, 121, 37
- The determination of vitamin C as furfural through the 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, with studies by this method, 123, ciii
- Roepke, R. R., and Hughes, J. S. Phosphorus partition in the blood serum of laying hens, 108, 79
- Rogers, Alan N. See HEPBURN, PAXSON, and ROGERS, 123, liv
- Rohdenburg, E. L. See WADDELL, 105, 711
- Rony, H. R., Mortimer, B., and Ivy, A. C. The source of the lipids found in the thoracic duct lymph in fasting. Endogenous lipid secretion and reabsorption in the bowel, 102, 161
- Ronzoni, Ethel. See KERLY and RONZONI, 103, 161
- and Kerly, Margaret. The disappearance of hexosephosphate from intact frog muscle, 103, 175
- and Ehrenfest, Ellen. The effect of dinitrophenol on the metabolism of frog muscle, 115, 749
- See PREISLER, HILL, RONZONI, and YOUNG, 123, xcv
- Root, Raymond W. The combination of carbon monoxide with hemocyanin, 104, 239
- and Green, Arda Alden. The effect of acidity on the carbon monoxide-combining power of hemoglobin in the blood of marine fishes, 106, 545
- Rose, Anton R., Exton, William G., and Blacker, C. A method for determining iron in biological materials, 105, lxxiii
- and —. Determination of indican in urine, 109, lxxvi
- , Schattner, Fred, and Exton, William G. Partition and determination of blood lipids, 119, lxxxiv
- See EXTON and ROSE, 123, xxxv
- Rose, Henry J. See RIEGEL and ROSE, 113, 117
- See RIEGEL, RAYDIN, and ROSE, 120, 523

- Rose, Mary Swartz, Vahlteich, Ella McCollum, and MacLeod, Grace.** Factors in food influencing hemoglobin regeneration. III. Eggs in comparison with whole wheat, prepared bran, oatmeal, beef liver, and beef muscle, 104, 217
- Rose, William C.** See MEYER and ROSE, 102, 461
- Further experiments upon a new dietary essential present in proteins, 105, lxxiii
- See CALDWELL and ROSE, 107, 45, 57
- See WOMACK and ROSE, 107, 449
- , McCoy, Richard H., Meyer, Curtis E., Carter, Herbert E., Womack, Madelyn, and Mertz, Edwin T. Isolation of the "unknown essential" present in proteins, 109, lxxvii
- See WOMACK and ROSE, 112, 275
- See MCCOY, MEYER, and ROSE, 112, 283
- , Kemmerer, Kenneth S., Womack, Madelyn, Mertz, Edwin T., Gunther, J. Kenneth, McCoy, Richard H., and Meyer, Curtis E. The present status of the amino acids in nutrition, 114, lxxxv
- See MEYER and ROSE, 115, 721
- See WOMACK and ROSE, 116, 381
- See MCCOY and ROSE, 117, 581
- See WOMACK, KEMMERER, and ROSE, 121, 403
- See GUNTHER and ROSE, 123, 39
- Rosenblatt, Max Barr.** A chemical study of the blood of *Alligator mississippiensis*, 116, 81
- Rosenblum, Louis A.** The surface inactivation of catalase, 109, 635
- Ross, Alan, and Rabinowitch, I. M.** The copper content of urine of normal children, 111, 803
- Ross, Frank J.** See DUNN, ROSS, and READ, 103, 579
- See DUNN, ROSS, and STODARD, 119, xxviii
- See DUNN and ROSS, 125, 309
- Ross, John R., and Shaw, Margaret M.** The effect of dehydration on the pancreatic and intestinal enzymes, 104, 131
- and Lucas, Colin C. A new method for the determination of minute amounts of lead in urine, 111, 285
- Ross, William F.** The spectroscopic identification of phenylalanine in protein material, 104, 531
- See BERGMANN, ZERVAS, and ROSS, 111, 245
- See BERGMANN and ROSS, 111, 659
- 114, 717
- Rothen, Alexandre.** See ELDERFIELD and ROTHEN, 106, 71
- See LEVENE and ROTHEN, 107, 533
- See LEVENE, ROTHEN, and MEYER, 107, 555

- . See LEVENE and ROTHEN, 111, 739
- . See LEVENE, ROTHEN, and MARKER, 115, 253
- . See LEVENE, ROTHEN, and MEYER, 115, 401
- . See LEVENE and ROTHEN, 115, 415
116, 209
119, 189
- . See LEVENE, ROTHEN, and KUNA, 120, 759, 777
121, 747
- Rottschaefer, Ellen Schock, and Bethell, Frank H. Simultaneous studies of the colloid osmotic pressure of the blood serum and changes in erythrocyte form during pregnancy, 114, lxxxv
- Roughton, F. J. W. The rapid thermochemistry of carbonic acid, 114, lxxxvi
- Rousselot, Louis. See SCHOENHEIMER, RITTENBERG, BERG, and ROUSSELOT, 115, 635
- Routh, Joseph I. The enzymatic hydrolysis of wool, 123, civ
- and Lewis, Howard B. The enzymatic digestion of wool, 124, 725
- Ruben, S. See PERLMAN, RUBEN, and CHAIKOFF, 122, 169
- . See FRIES, RUBEN, PERLMAN, and CHAIKOFF, 123, 587
- . See ENTENMAN, RUBEN, PERLMAN, LORENZ, and CHAIKOFF, 124, 795
- Rubin, Fay. See LANDAUER, UPHAM, and RUBIN, 108, 121
- Rubin, S. H. See GREENWALD and RUBIN, 114, xlv
- , Present, Clara H., and Ralli, Elaine P. The liver lipids in normal dogs on different types of fat, with and without added lecithin, 121, 19
- Rupel, I. W. See BAUMANN, STEENBOCK, BEESON, and RUPEL, 105, 167
- Russell, F. H. See ANDERSON, RUSSELL, and SEIGLE, 113, 683
- Russell, Jane A. See FISHER, RUSSELL, and CORI, 115, 627
- Russell, Mary A. See WEIL and RUSSELL, 106, 505
- Russell, Nellie M. See HUBBARD and RUSSELL, 119, 647
- Russell, Walter C., Taylor, M. W., and Wilcox, D. E. The fate of the antirachitic factor in the chicken. III. The distribution of the factor from cod liver oil and from irradiated ergosterol in certain tissues of the chicken, 105, lxxiv
- , —, and —. III. The effective levels and the distribution of the factor from cod liver oil and from irradiated ergosterol in certain tissues of the chicken, 107, 735
- , —, and Duncan, Marion T. Bone growth in normal and rachitic rats, 119, lxxxv
- Rutenber, Charles B., and Andrews, James C. Studies on the Benedict-Denis procedure for the determination

- Rutenber, Charles B.**—*continued*
 of total sulfur in biological materials, 119, lxxxvi
 — and —. The applicability of the Benedict-Denis procedure to the determination of methionine sulfur, 120, 203
 —. See **ANDREWS, ANDREWS, and RUTENBER,** 123, iii
Rutz, Marshall H. See **CARTLAND, MEYER, MILLER, and RUTZ,** 109, 213
Rymer, Marion Reinhardt, and Lewis, Robert C. Further study of the growth effect of the residue remaining after alcoholic extraction of yeast, 114, 361

S

- Sachs, Adolph.** See **LEVINE, SACHS, and FABIAN,** 119, lxiii
Sadusk, Joseph F., Jr. See **BALL and SADUSK,** 113, 661
Sahyun, Melville. Some observations on blood phosphate, 101, 295
 —. The determination of glycogen, 103, 203
 —. Studies on growth factors; their effect on the growth of certain pathogens, and their effect on *Escherichia coli*, 109, lxxviii
 — and **Feldkamp, Rolland F.** The determination of zinc in biological material, 116, 555
 —, **Goodell, M., and Nixon, Arthur.** Factors influencing the stability of insulin, 117, 685
Saifer, Abraham, and Kornblum, Morris. Determination of chlorides in biological fluids by the use of adsorption indicators. The use of dichloro-fluorescein for the volumetric microdetermination of chlorides in cerebrospinal fluids and blood serum, 112, 117
 — and —. Determination of chlorides in biological fluids by the use of adsorption indicators. The use of diphenylamine blue for the volumetric microdetermination of chlorides in urine and blood filtrates, 114, 551
 — and **Hughes, James.** Dioxane as a reagent for qualitative and quantitative determination of small amounts of iodide. Its application to the detection of iodide in iodized salt, 118, 241
 — and —. Dioxane as a reagent for qualitative and quantitative determination of small amounts of iodide. Its application to the detection of iodide in iodized salt. A correction, 121, 801
Salisbury, L. Frank, and Anderson, R. J. The chemistry of the lipids of yeast. III. Lecithin and cephalin, 112, 541
 —. The lipids of Connecticut shade-grown tobacco seed, 117, 21
Salit, Peter Waldemar. Calcium content of the aqueous and vitreous humors and serum, 104, 275

- Salmon, W. D.** The effect of certain oils in alleviating localized erythematous dermatitis (acrodynia or vitamin B₆ deficiency) in rats, 123, civ
- Salomon, Kurt.** See STERN and SALOMON, 122, 461
- Salter, William T., and Pearson, Olof H.** The enzymic synthesis from thyroid diiodotyrosine peptone of an artificial protein which relieves myxedema, 112, 579
- See COHN, SALTER, and FERRY, 123, xxiv
- Saltzman, Max.** See HOLLANDER and SALTZMAN, 123, lix
- Samisch, Rudolf.** The measurement of phenolase activity, 110, 643
- Samisch, Zdenka.** See MORGAN and SAMISCH, 105, lxiv
- See MORGAN, KIMMEL, THOMAS, and SAMISCH, 106, 531
- See MORGAN and SAMISCH, 108, 741
- Samuels, Leo T.** See GULICK, SAMUELS, and DEUEL, 105, 29
- See DEUEL, HALLMAN, MURRAY, and SAMUELS, 119, 607
- Samuelson, George S.** See HALEY and SAMUELSEN, 119, 383
- Sandberg, Marta, and Perla, David.** Nitrogen and sulfur metabolism in suprarenalec-tomized rats, 113, 35
- Sando, Charles E.** See MARKLEY and SANDO, 101, 431
- See MATLACK and SANDO, 104, 407
- See MARKLEY and SANDO, 105, 643
- , Milner, R. T., and Sherman, Mildred S. Pigments of the Mendelian color types in maize. Chrysanthemin from purple-husked maize, 109, 203
- See MARKLEY, HENDRICKS, and SANDO, 111, 133
- , Markley, K. S., and Matlack, M. B. Some chemical constituents of flowering dogwood (*Cornus florida*), 114, 39
- Coloring matters of Grimes Golden, Jonathan, and Stayman Winesap apples, 117, 45
- See MARKLEY and SANDO, 119, 641
- See MARKLEY, SANDO, and HENDRICKS, 123, 641
- Sands, Lila, and Gary, Wilbur Y.** The hemicelluloses of mesquite wood, 101, 573
- and Nutter, Pauline. The hemicelluloses extracted from mesquite wood after chlorination, 110, 17
- Sandstedt, R. M.** See BLISH and SANDSTEDT, 118, 765
- Saper, E.** See HOLLANDER, BODECKER, SAPER, and APPLEBAUM, 105, xl
- Saul, Everett L., and Nelson, J. M.** The influence of proteins on the activity of yeast invertase, 111, 95
- Saunders, Donald H.** See WILLIAMS and SAUNDERS, 105, xcix

- Saurwein, Esther M. See BING, SAURWEIN, and MYERS, 105, 343
- Sawyer, Susan D. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, 103, 93
- See BLATHERWICK, BRADSHAW, EWING, LARSON, and SAWYER, 111, 537
- See BLATHERWICK, BRADSHAW, CULLIMORE, EWING, LARSON, and SAWYER, 113, 405
- See BLATHERWICK, BRADSHAW, and SAWYER, 114, xii
- See LARSON, BLATHERWICK, BRADSHAW, EWING, and SAWYER, 117, 719
- 123, lxxiii
- Schaefer, Werner. See CHARGAFF and SCHAEFER, 109, xix
- 112, 393
- Schaffer, Norwood K., and Lee, Milton. The effect of the anterior pituitary growth hormone on protein metabolism, 108, 355
- Schaible, Philip J., Bandemer, S. L., and Moore, J. M. Mineral partition during intestinal digestion, 109, lxxix
- Schantz, E. J., Elvehjem, C. A., and Hart, E. B. The relation of fat to the utilization of lactose in milk, 122, 381
- Schattner, Fred. See ROSE and EXTON, 109, lxxvi
- See ROSE, SCHATTNER, and EXTON, 119, lxxxiv
- Schiefelbusch, Anna T. See COONS, COONS, and SCHIEFELBUSCH, 104, 757
- Schiltz, Lee R., and Carter, Herbert E. Synthesis of serine, 116, 793
- Schleich, H. See BERGMANN, ZERVAS, FRUTON, SCHNEIDER, and SCHLEICH, 109, 325
- Schlenker, Frank S. The quantitative microanalysis of plant juice for reducing sugars and sucrose, 102, 29
- Non-sugar reducing substances in plant juices, 117, 727
- Schlutz, Frederic W. See MORSE, SCHLUTZ, and HASTINGS, 105, lxiv
- See MORSE and SCHLUTZ, 109, lxix
- See KNOTT and SCHLUTZ, 114, lix
- See MORSE and SCHLUTZ, 114, lxxiv
- See KNOTT and SCHLUTZ, 119, lviii
- See MORSE and SCHLUTZ, 119, lxxi
- 123, lxxxvii
- Schmelkes, Franz C. See GUITERAS and SCHMELKES, 107, 235
- Schmidt, Carl L. A. See GREAVES and SCHMIDT, 102, 101
- See DALTON and SCHMIDT, 103, 549
- See CZARNETZKY and SCHMIDT, 105, 301
- See JUKES and SCHMIDT, 105, 359

- See GREAVES and SCHMIDT,
105, xxxi
- See ZITTLE and SCHMIDT,
108, 161
- See DALTON and SCHMIDT,
109, 241
- See JUKES and SCHMIDT,
110, 9
- See MEHL and SCHMIDT,
114, lxvii
- See LINDQUIST and SCHMIDT,
119, lxiii
- Schmidt, Clarence F., Jr. The
formation of fatty acids from
glucose by *Aspergillus niger*,
110, 511
- Schmidt, E. G., Schmulovitz,
Maurice J., Szczpinski, A., and
Wylie, H. Boyd. The phenol
and imidazole content of the
blood, 120, 705
- The determination of
sulfanilamide in tungstic acid
blood filtrates by means of
sodium β -naphthoquinone-4-
sulfonate, 122, 757
- Schmidt, Jacob E. See CARR,
MUSSEY, SCHMIDT, and
KRANTZ, 102, 721
- Schmidt, L. H., and Bradford,
H. A. Preliminary report on
the influence of thyroxine in-
jections on the lipid content of
blood and tissues, 105, lxxv
- The nature of the difference
in phospholipid content of
oxalated and heparinized
plasma, 109, 449
- The secretion of sodium
cholate into the bile as affected
by thyroxine, 119, lxxxvii
- Schmidt, Marguerite M. See
KRUSE, SCHMIDT, and Mc-
COLLUM, 106, 553
- Schmulovitz, Maurice J., and
Wylie, H. Boyd. The chem-
ical estimation of theelin with
diazobenzenesulfonic acid,
116, 415
- See SCHMIDT, SCHMULOVITZ,
SZCZPINSKI, and WYLIE,
120, 705
- Schneider, Burch H. The sub-
division of the metabolic nitro-
gen in the feces of the rat,
swine, and man, 109, 249
- Schneider, F. See BERGMANN,
ZERVAS, FRUTON, SCHNEIDER,
and SCHLEICH, 109, 325
- See BERGMANN and ZERVAS,
113, 341
- Schneider, H., and Steenbock,
H. Differences in response to
vitamin D₂ of rats on cereal
low phosphorus diets and syn-
thetic low phosphorus diets,
123, cv
- Schock, Ellen D. See CALVERY
and SCHOCK, 109, xvi
- See JENSEN, EVANS, PEN-
NINGTON, and SCHOCK,
109, xlv
- , Jensen, H., and Hellerman,
Leslie. The inactivation of
insulin. The effects of certain
metal derivatives and of sulf-
hydryl compounds,
111, 553
- See CALVERY and SCHOCK,
113, 15
- See CALVERY, BLOCK, and
SCHOCK, 113, 21
- See JENSEN, EVANS, PEN-
NINGTON, and SCHOCK,
114, 199

- Schoeffel, Eugene.** See **NIE-MANN, SCHOEFFEL, and LINK,** 101, 337
- Schoenbach, E. B.** See **CONANT, CHOW, and SCHOENBACH,** 101, 463
- Schoenheimer, Rudolf, and Breusch, Fritz L.** Synthesis and destruction of cholesterol in the organism, 103, 439
- and **Hilgetag, Guenter.** The occurrence and secretion mechanism of cetyl alcohol in the animal organism, 105, 73
- The presence of cholesterol in the feces, 105, 355
- The significance of cetyl alcohol in the organism, 105, lxxvi
- and **Sperry, Warren M.** A micromethod for the determination of free and combined cholesterol, 106, 745
- and —. Sterol secretion and coprosterol formation, 107, 1
- , —, and **Dam, Henrik.** Specificity of sterol absorption, 109, lxxix
- See **SPERRY and SCHOENHEIMER,** 109, lxxxvi
- The action of iodides on sterol dibromides and the preparation of cholestenone, 110, 461
- See **SPERRY and SCHOENHEIMER,** 110, 655
- , **Dam, Henrik,** and **von Gottberg, Klemens.** The absence of allocholesterol in the organism, 110, 659
- , —, and —. The absorbability of allocholesterol, 110, 667
- and **Rittenberg, D.** Deuterium as an indicator in the study of intermediary metabolism. I, 111, 163
- See **RITTENBERG and SCHOENHEIMER,** 111, 169
- and **Rittenberg, D.** Deuterium as an indicator in the study of intermediary metabolism. III. The rôle of the fat tissues, 111, 175
- , —, and **Graff, M.** Deuterium as an indicator in the study of intermediary metabolism. IV. The mechanism of coprosterol formation, 111, 183
- and —. Deuterium as an indicator in the study of intermediary metabolism. V. The desaturation of fatty acids in the organism, 113, 505
- and —. Synthesis and destruction of organic molecules in the animal organism as measured with deuterium as an indicator, 114, lxxxvii
- and —. Deuterium as an indicator in the study of intermediary metabolism. VI. Synthesis and destruction of fatty acids in the organism, 114, 381
- See **ANCHEL and SCHOENHEIMER,** 114, 539
- and **Evans, E. A., Jr.** Allocholesterol and epiallocholesterol, 114, 567
- See **EVANS and SCHOENHEIMER,** 115, 17

- and Berliner, Frieda. The preparation of lithocholic acid from cholesterol, 115, 19
- , Rittenberg, D., Berg, Benjamin N., and Rousset, Louis. Deuterium as an indicator in the study of intermediary metabolism. VII. Studies in bile acid formation, 115, 635
- See RITTENBERG and SCHOENHEIMER, 117, 485
- Studies in the intermediate metabolism of the fatty acids with deuterium as an indicator, 119, lxxxvii
- and Rittenberg, D. Deuterium as an indicator in the study of intermediary metabolism. IX. The conversion of stearic acid into palmitic acid in the organism, 120, 155
- and Johnston, Charles G. Lithocholic acid gallstones from hog bile, 120, 499
- See RITTENBERG, SCHOENHEIMER, and EVANS, 120, 503
- See RITTENBERG and SCHOENHEIMER, 121, 235
- See KESTON, RITTENBERG, and SCHOENHEIMER, 122, 227
- See RITTENBERG, FOSTER, and SCHOENHEIMER, 123, cii
- , Foster, G. L., Rittenberg, D., and Ratner, S. Exploratory experiments on the application of the nitrogen isotope N^{15} to the study of intermediary metabolism, 123, cv
- See FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER, 124, 159
- See BERLINER and SCHOENHEIMER, 124, 525
- See ANCHEL and SCHOENHEIMER, 124, 609
- See RITTENBERG, KESTON, SCHOENHEIMER, and FOSTER, 125, 1
- See FOSTER, RITTENBERG, and SCHOENHEIMER, 125, 13
- See ANCHEL and SCHOENHEIMER, 125, 23
- See VAN HEYNINGEN, RITTENBERG, and SCHOENHEIMER, 125, 495
- Schönheyder, Fritz. The formation of coproporphyrin I and hemoglobin during embryonic life, 123, 491
- Schoenleber, Florence. See PARSONS, JANSSEN, and SCHOENLEBER, 105, lxxvii
- Schormüller, A. See LEVENE and SCHORMÜLLER, 103, 537
- 105, 547
- 106, 595
- Schroeder, E. F., Woodward, Gladys E., and Platt, Muriel E. The relation of sulfhydryl to inhibition of yeast fermentation by iodoacetic acid, 101, 133
- See PLATT and SCHROEDER, 104, 281
- 106, 179
- See WOODWARD, MUNRO, and SCHROEDER, 109, 11
- , Munro, Muriel Platt, and Weil, Leopold. Glyoxalase.

Schroeder, E. F.—*continued*

- V. The enzymatic nature of kidney antiglyoxalase, 110, 181
- and Woodward, Gladys E. The enzymatic hydrolysis of glutathione by rat kidney, 120, 209
- Schubert, Maxwell P. See MICHAELIS and SCHUBERT, 106, 331
- . Combination of thiol acids with methylglyoxal, 111, 671
- . Compounds of thiol acids with aldehydes, 114, 341
- . See MICHAELIS and SCHUBERT, 115, 221
- . The interaction of iodoacetic acid and tertiary amines, 116, 437
- . See MICHAELIS, SCHUBERT, and SMYTHE, 116, 587
- . See MICHAELIS and SCHUBERT, 119, 133
- . Reactions of semimercaptals with amino compounds, 121, 539
- Schuette, H. A., Garvin, Thelma M., and Schwoegler, Edward J. The abdominal fat of the Western range horse, 107, 635
- Schultz, Fred, and Hill, Robert M. The influence of environmental temperature on the body temperature-lowering properties of 1,5-diphenylpyrazoline-3-carboxylic acid, 123, cvi
- Schultz, Harold W. The thermostability of some of the

components of the vitamin B complex in yeast, 119, lxxxviii

- and Mattill, H. A. Studies on the vitamin B complex, 122, 183
- Schultze, M. O., and Elvehjem, C. A. The relation of iron and copper to the reticulocyte response in anemic rats, 102, 357
- and —. An improved method for the determination of hemoglobin in chicken blood, 105, 253
- , —, and Hart, E. B. The availability of copper in various compounds as a supplement to iron in hemoglobin formation, 106, 735
- , —, and —. Further studies on the availability of copper from various sources as a supplement to iron in hemoglobin formation, 115, 453
- , —, and —. Studies on the copper and iron content of tissues and organs in nutritional anemia, 116, 93
- , —, and —. Studies on the copper content of the blood in nutritional anemia, 116, 107
- and —. Studies on the glutathione content of the blood in nutritional anemia, 116, 711
- . See LYMAN, SCHULTZE, and KING, 118, 757
- . See STOTZ, HARRER, SCHULTZE, and KING, 120, 129
- , Stotz, Elmer, and King, C. G. Studies on the reduction of de-

- hydroascorbic acid by guinea pig tissues, 122, 395
- See STOTZ, HARRER, SCHULTZE, and KING, 122, 407
- Schwartz, Ruth. See HAMILTON and SCHWARTZ, 109, 745
- Schwarz, Herman, and Lichtenberg, Henry H. Relationship of the blood cholesterol to the hemoglobin and serum protein, 121, 315
- Schwarzenbach, G. See MICHAELIS and SCHWARZENBACH, 123, 527, lxxxiv
- Schwenk, E. See WHITMAN, WINTERSTEINER, and SCHWENK, 118, 789
- Schwob, Claude R., and Ceredo, Leopold R. Studies on the oxidation of uracil *in vitro*, 105, lxxvi
- Schwoegler, Edward J. See SCHUETTE, GARVIN, and SCHWOEGLER, 107, 635
- , Babler, Bernard J., and Hurd, Loren C. Copper selenite as a catalyst in the Kjeldahl nitrogen determination, 113, 749
- Scott, Aleita Hopping. Standard iodine solutions, 113, 511
- An aeration method for determining lactic acid, 114, lxxxvii
- and Berg, Benjamin N. Blood lactic acid following the administration of insulin in cats without the adrenal medulla, 115, 163
- Scott, D. A. See CHARLES and SCOTT, 102, 425, 431
- and Charles, A. F. Studies on heparin. III. The purification of heparin, 102, 437
- See FISHER and SCOTT, 106, 289, 305
- and Fisher, A. M. The prolongation of insulin action by protamine and zinc, 114, lxxxviii
- See FISHER and SCOTT, 119, xxxiii
- Scott, F. H. See BELLIS and SCOTT, 111, 17
- See LEHMAN and SCOTT, 111, 43
- Scudi, John V. The determination of sulfanilamide (*p*-aminobenzenesulfonamide) in biological media, 122, 539
- Sealock, Robert Ridgely. See DU VIGNEAUD, SIFFERD, and SEALOCK, 102, 521
- See DU VIGNEAUD, SEALOCK, and VAN ETEN, 112, 451
- See DU VIGNEAUD, IRVING, DYER, and SEALOCK, 123, 45
- Seegers, Walter H., and Mattill, H. A. Further studies on the nutritive value of alcohol-extracted animal tissues and the supplements required for growth and lactation, 105, lxxvii
- The availability of tissue nutrients after alcohol extraction and after heating, 109, lxxx
- and Mattill, H. A. The effect of heat and hot alcohol on liver proteins, 110, 531

Seegers, Walter H.—*continued*

—, Smith, H. P., Warner, E. D.,
and Brinkhous, K. M. The
purification of prothrombin,
123, 751

Seelig, S. See SENDROY, SEELIG,
and VAN SLYKE,
106, 463, 479

Seevers, M. H. See ORCUTT and
SEEVERS, 117, 501

Seibert, Florence B., and Mun-
day, Betty. The chemical com-
position of the active principle
of tuberculin. XVII. A com-
parison of the nitrogen parti-
tion analyses of the proteins
from different acid-fast bacilli
and the relationship to bio-
logical activity, 101, 763

— See SPIEGEL-ADOLF and
SEIBERT, 105, lxxxiii
106, 373

— Acid-base-combining ca-
pacity of tuberculin protein,
114, lxxxix

Seigle, L. W. See ANDERSON,
RUSSELL, and SEIGLE,
113, 683

— See ANDERSON, SEIGLE,
KRZNARICH, RICHARDS, and
MARTENY, 121, 165

Sell, Harold M., and Link, Karl
Paul. Derivatives of *d*-galac-
turonic acid. IV. The prepa-
ration of the methyl ester of
d-galacturonic acid,
125, 229

— and —. V. The synthesis of
the methyl esters of choles-
terol, sitosterol, and ergosterol
triacyl-*d*-galacturonides,
125, 235

— and Kremers, Roland E. The
synthesis of esters of ursolic
acid, 125, 451

Semb, Joseph, Baumann, C. A.,
and Steenbock, H. Fat-
soluble vitamins. XLI. The
carotene and vitamin A con-
tent of colostrum, 107, 697

— See STEENBOCK, SEMB, and
VAN DONK, 114, ci

Sendroy, Julius, Jr. See VAN
SLYKE and SENDROY,
102, 505

— The oxygen tension and
oxygen consumption of urine,
105, lxxviii

—, Dillon, Robert T., and Van
Slyke, Donald D. Studies of
gas and electrolyte equilibria
in blood. XIX. The solu-
bility and physical state of
uncombined oxygen in blood,
105, 597

—, Seelig, S., and Van Slyke,
Donald D. Studies of acidosis.
XXII. Application of the
Henderson-Hasselbalch equa-
tion to human urine,
106, 463

—, —, and —. XXIII. The
carbon dioxide tension and
acid-base balance of human
urine, 106, 479

— The gasometric determina-
tion of chloride in serum and
urine, 109, lxxxix

—, Shedlovsky, Theodore, and
Belcher, Donald. The valid-
ity of determinations of the pH
of whole blood at thirty-eight
degrees with the glass elec-
trode, 115, 529

- . Microdetermination of chloride in biological fluids, with solid silver iodate. I. Gasometric analysis, 120, 335
- . II. Titrimetric analysis, 120, 405
- . III. Colorimetric analysis, 120, 419
- . Note on errors in the analysis of chloride in albuminous urine, 120, 441
- Series, Earl R. See HIRSCHFELDER and SERLES, 104, 635
- Setterfield, H. E. See SUTTON, SETTERFIELD, and KRAUSS, 105, lxxxix
- Setz, Paul. See THANNHAUSER and SETZ, 116, 527, 533
- Sevag, M. G., Lackman, David B., and Smolens, J. The isolation of the components of streptococcal nucleoproteins in serologically active form, 124, 425
- Severac, M. See RAIZISS, SEVERAC, MOETSCH, and CLEMENCE, 123, xcix
- Sevringhaus, Elmer L. See CAPE and SEVRINGHAUS, 103, 257
121, 549
- , Heller, Carl G., Lauson, Henry, and Golden, June B. Comparison and assay of estradiol, estrone, and estriol, 123, cvii
- Shack, Joseph. The effect of oxygenation and reduction on the equilibrium of hemocyanin with acids and bases, 109, 383
- Shaffer, Philip A. The influence of equivalent-valence change on the velocity of aqueous oxidation-reduction reactions, 105, lxxviii
- and Williams, Ray D. Sugar determination by the ferricyanide electrode, 111, 707
- . See HILL and SHAFFER, 114, li
- . Stanley Rossiter Benedict, 117, preceding p. 429
- Shapiro, Inez. Studies on ketosis. V. The comparative glycolytic and ketolytic action of glucose and some carbohydrate intermediates, 108, 373
- Sharlit, Herman. A method for the quantitative estimation of indoxyl compounds in blood, 104, 115
- Shaw, John L., and Downing, Virginia. The determination of oxygen in blood in the presence of ether by a modification of the Van Slyke-Neill technique, 109, 405
- Shaw, Margaret M. See Ross and SHAW, 104, 131
- Shear, M. J. The effect of protein on the swelling of normal and tumor cells *in vitro*, 105, lxxix
- . Titration of mouse tumors, 109, lxxxi
- . Studies in carcinogenesis. III. Isomers of cholanthrene and methyleholanthrene, 114, lxxxix
- . IV. Development of liver tumors in pure strain mice

Shear, M. J.—*continued*

following the injection of 2-amino-5-azotoluene,

114, xc

— Carcinogenic activity of some anthracene derivatives, 123, cviii

Shedlovsky, Theodore. See SENDROY, SHEDLOVSKY, and BELCHER, 115, 529

— See CRAIG, SHEDLOVSKY, GOULD, and JACOBS, 125, 289

Shenk, John H., Hall, J. Lowe, and King, H. H. Spectrophotometric characteristics of hemoglobins. I. Beef blood and muscle hemoglobins, 105, 741

Sheppard, Fay. See EVERETT, SHEPPARD, and JOHNSON, 104, 1

— See EVERETT, EDWARDS, and SHEPPARD, 104, 11

— and Everett, Mark R. The second stage of bromine oxidation of carbohydrates, 105, lxxx

— and —. Effects of nitrogenous substances upon sugar determination, 109, lxxxii

— and —. Differentiation of glucosides by prolonged action of bromine involving the second stage of oxidation, 114, xci

— See EVERETT and SHEPPARD, 119, xxxii

— and Everett, Mark R. Determination of carbohydrates in proteins, 119, lxxxix

— See DUFF, SHEPPARD, and EVERETT, 123, xxxii

— See HART, SHEPPARD, and EVERETT, 123, lii

Sheppeck, Michael, and Griffith, Wendell H. The effect of inorganic salts on the detoxication of benzoic acid in rats, 114, xcii

Sherman, Caroline C., Mendel, Lafayette B., and Smith, Arthur H. Determination and metabolism of citric acid, 109, lxxxiii

— See PUCHER, SHERMAN, and VICKERY, 113, 235

—, Mendel, Lafayette B., and Smith, Arthur H. The citric acid formed in animal metabolism, 113, 247

—, —, and —. The metabolism of orally administered citric acid, 113, 265

Sherman, H. C., and Ellis, L. N. Necessary *versus* optimal intake of vitamin G (B₂), 104, 91

—, Caldwell, M. L., and Doebebeling, S. E. Further studies upon the purification and properties of malt amylase, 104, 501

— See FINCKE and SHERMAN, 110, 421

— See CAMPBELL, BESSEY, and SHERMAN, 110, 703

— See BESSEY, KING, QUINN, and SHERMAN, 111, 115

— See BISBEY and SHERMAN, 112, 415

— See WHITCHER, BOOHER, and SHERMAN, 115, 679

— See TOEPFER and SHERMAN, 115, 685

- . See CONNER and SHERMAN, 115, 695
- . See KAO, CONNER, and SHERMAN, 123, 221
- . See LANFORD and SHERMAN, 123, lxxiii
- Sherman, Jane M. See TALBOTT and SHERMAN, 115, 361
- Sherman, Mildred S. See SANDO, MILNER, and SHERMAN, 109, 203
- . See MARKLEY, NELSON, and SHERMAN, 118, 433
- Sherman, W. C. See ELVEHJEM, HART, and SHERMAN, 103, 61
- , Elvehjem, C. A., and Hart, E. B. Factors influencing the utilization of the iron and copper of egg yolk for hemoglobin formation, 107, 289
- , — , and — . Further studies on the availability of iron in biological materials, 107, 383
- . See ELVEHJEM, SHERMAN, and ARNOLD, 109, xxix
- Sherwin, Carl P. See AMBROSE, POWER, and SHERWIN, 101, 669
- . See HARROW, MAZUR, and SHERWIN, 102, 35
- . See AMBROSE and SHERWIN, 105, iv
- . See HARROW, MAZUR, BOREK, and SHERWIN, 105, xxxiv
- Shilling, Charles W. See HAWKINS and SHILLING, 113, 273, 649
- Shillito, Frederick H., Bidwell, Emily H., and Turner, Kenneth B. The blood cholesterol in the carotid artery, venæ cavæ, and portal vein, 112, 551
- Shine, William M. See CORI and SHINE, 114, xxi
- Shinn, Leo A. See HARTMAN, KANE, and SHINN, 105, xxxvi
- . See MEIGS, TURNER, KANE, and SHINN, 105, lx
- . See KANE and SHINN, 109, xlviii
- and Cary, C. A. Determination of vitamin A in butter fat, 114, xcii
- , Kane, Edward A., Wiseman, H. G., and Cary, C. A. The accuracy of routine carotene determinations as a measure of vitamin A potency, 119, lxxxix
- Shinohara, Kamenosuke, and Kilpatrick, Martin. The stability of cystine in acid solution, 105, 241
- . The determination of thiol and disulfide compounds, with special reference to cysteine and cystine. I. Critical study of the color reaction between phospho-18-tungstic acid reagent and thiol compounds, 109, 665
- . A precision method for the determination of cysteine applicable to the standardization of cysteine hydrochloride, 109, lxxxiv
- . The determination of thiol and disulfide compounds, with special reference to cysteine and cystine. II. A critical study of the reaction between

Shinohara, Kamenosuke—*continued*

- phospho-18-tungstic acid reagent and other substances than thiol compounds, 110, 263
- III. Reaction between thiol compounds and mercuric chloride, 111, 435
- IV. A precision method for the determination of thiol compounds applied to the standardization of cysteine hydrochloride, 112, 671
- V. A critical study of cystine determination by sulfite and phospho-18-tungstic acid reagent, 112, 683
- and Padis, Kively E. The determination of thiol and disulfide compounds, with special reference to cysteine and cystine. VI. The reactions of ascorbic acid and glutathione with phospho-18-tungstic acid reagent, 112, 697
- and — VII. Application of the modified phospho-18-tungstic acid method for the determination of cysteine, cystine, and ascorbic acid in urine, 112, 709
- The determination of thiol and disulfide compounds, with special reference to cysteine and cystine. VIII. Molecular ratio between A-phospho-18-tungstic acid and cysteine in their color reaction, 120, 743
- Shipley, R. A. An investigation of the nature of the hypophyseal ketogenic principle, 123, cix

- Shock, Nathan W., and Hastings, A. Baird. Studies of the acid-base balance of the blood. I. A microtechnique for the determination of the acid-base balance of the blood, 104, 565
- See HASTINGS and SHOCK, 104, 575
- and Hastings, A. Baird. Studies of the acid-base balance of the blood. III. Variation in the acid-base balance of the blood in normal individuals, 104, 585
- and — IV. Characterization and interpretation of displacement of the acid-base balance, 112, 239
- Shohl, Alfred T. Rickets and tetany due to low calcium diets, 109, lxxxv
- Shore, Agnes, Wilson, Hildegarde, and Stueck, George. The amide nitrogen of ovalbumin, 112, 407
- Shrewsbury, Charles L., and Kraybill, Henry R. The carotene content, vitamin A potency, and antioxidants of butter fat, 101, 701
- Shukers, Carroll F. See DAY, LANGSTON, and SHUKERS, 114, xxv
- Shwachman, Harry, Hellerman, Leslie, and Cohen, Barnett. On the reversible inactivation of pneumococcal hemolysin. The effects of oxidation and reduction and of metal compounds, 107, 257
- Sidwell, A. E., Jr. See HOGNESS, ZSCHEILE, SIDWELL, and BARRON, 118, 1

- . See HOGNESS, SIDWELL, and ZSCHEILE, 120, 239
- , Munch, R. H., Barron, E. S. Guzman, and Hogness, T. R. The salt effect on the hemoglobin-oxygen equilibrium, 123, 335
- . See STOTZ, SIDWELL, and HOGNESS, 123, cxviii 124, 11, 733
- Sifferd, Robert H. See DU VIGNEAUD, SIFFERD, and SEALOCK, 102, 521
- and du Vigneaud, Vincent. A new synthesis of carnosine, with some observations on the splitting of the benzyl group from carbobenzoxy derivatives and from benzylthio ethers, 108, 753
- . See DU VIGNEAUD, SIFFERD, and IRVING, 117, 589
- Sigal, A., and King, C. G. The relationship of vitamin C to glucose tolerance in the guinea pig, 116, 489
- Silberman, Alfred K., and Lewis, Howard B. Pentose metabolism. III. The rate of absorption of *l*-rhamnose and the formation of glycogen in the organism of the white rat after oral administration of *l*-rhamnose, 101, 741
- Silberman, David E. See LEVY and SILBERMAN, 118, 723
- Silver, Bernard E., and Cerecedo, Leopold R. The metabolism of pyrimidines in the growing dog, 114, xciii
- Silverblatt, Ethyl. See MUSELIN, WOODWARD, SILVERBLATT, and KING, 114, lxxiv
- Simon, Elizabeth E., and White, Abraham. Production of a deficiency in sulfur-containing amino acids by the administration of iodoacetic acid, 123, cix
- Simonsen, Daisy G. The oxidation of cysteine with iodine: formation of a sulfinic acid, 101, 35
- Simpson, James C. E. See JACOBS and SIMPSON, 105, 501
- and Jacobs, Walter A. Sarsasapogenin. II, 109, 573
- . See JACOBS and SIMPSON, 110, 429
- and Jacobs, Walter A. Sarsasapogenin. III. Desoxysarsasapogenin. Further degradations of sarsasapogenin, 110, 565
- Sinclair, Robert Gordon. The passage of fed elaidic acid into tissue phospholipids, 109, lxxxv
- . The metabolism of the phospholipids. VI. Relative proportions of saturated and unsaturated fatty acids in phospholipids of different degrees of unsaturation, 111, 261
- . VII. Further evidence of the selection and retention of unsaturated fatty acids by phospholipids of animal tissues, 111, 275
- . VIII. The passage of elaidic acid into tissue phospholipids. Evidence of the intermediary rôle of liver phospholipid in fat metabolism, 111, 515

Sinclair, Robert Gordon—*continued*

- Evidence of the synthesis of essential unsaturated fatty acids by the rat, 114, xciv
- Further evidence of the existence of metabolic and non-metabolic phospholipids, 114, xciv
- Blood phospholipid as a transport mechanism, 115, 211
- See McCONNELL and SINCLAIR, 118, 123, 131
- The phospholipids of the intestinal mucosa during fat absorption, 119, xc
- and Smith, Clair. The turnover of phospholipids in the intestinal mucosa, 121, 361
- Sisson, E. W. See BOSWORTH and SISSON, 107, 489
- Sizer, Irwin W. See GOULD and SIZER, 124, 269
- Sklersky, Samuel. See SOBEL and SKLERSKY, 122, 665
- Slanetz, Charles A. See BRAND, CAHILL, and SLANETZ, 123, xvi
- Smart, B. W. See DUNN, SMART, REDEMANN, and SMITH, 105, xxiii
- Smelo, Leon S., Kern, Franklin M., and Drabkin, David L. Determination of saccharoids and the relationship of the saccharoid content of the blood to diet and drugs, 125, 461
- Smetana, Hans. Studies on photodynamic action. I. Photooxidation of body fluids, 124, 667

- II. The fate of hematoporphyrin after parenteral administration. III. The influence of sensitizer on photooxidation of tissues, 125, 741
- Smith, Arthur H. See BROOKE, SMITH, and SMITH, 104, 141
- See ORTEN and SMITH, 105, 181, lxvi
- See SMITH and SMITH, 105, lxxxix
- and Smith, Paul K. Inorganic salts in nutrition. X. Electrolyte balance in the serum of rats receiving a diet deficient in inorganic constituents, 107, 681
- See LIGHT, SMITH, SMITH, and ANDERSON, 107, 689
- See SHERMAN, MENDEL, and SMITH, 109, lxxxiii
- See SWANSON, STORVICK, and SMITH, 114, 309
- See ORTEN and SMITH, 114, lxxviii
- See EPPRIGHT and SMITH, 118, 679
- See WINNEK and SMITH, 119, 93
- See ORTEN and SMITH, 119, lxxiv
- See WINNEK and SMITH, 119, cvi
- and Orten, James M. The rate of citric acid formation following the injection of the sodium salts of certain dicarboxylic acids, 124, 43

- Smith, Clair.** See SINCLAIR and SMITH, 121, 361
- Smith, Elizabeth, R. B.** The effect of variations in ionic strength on the apparent isoelectric point of egg albumin, 108, 187
- The influence of method of preparation and of cations on the isoelectric point of ovalbumin, 113, 473
- and **Smith, Paul K.** The activity of glycine in aqueous solution at twenty-five degrees, 117, 209
- and — The activity coefficients of some amino acids, 119, xci
- See SMITH and SMITH, 121, 607
- See SMITH, TAYLOR, and SMITH, 122, 109
- Thermodynamic properties of some amino acids and peptides in aqueous solution, 123, cx
- Smith, H. Gregg.** The metabolism of azelaic acid, 103, 531
- Smith, H. P.** See SEEGER, SMITH, WARNER, and BRINKHOUS, 123, 751
- Smith, Homer W.** See BUNIM, SMITH, and SMITH, 118, 667
- See SMITH and SMITH, 124, 107
- Smith, James H. C.** Carotene. VI. A note on the hydrogenation of α - and β -carotenes, 102, 157
- and **Milner, Harold W.** Carotene. VII. Physical

- properties of carotenes from different plant sources, 104, 437
- Smith, Laura Lee W., and Morgan, Agnes Fay.** The effect of light upon the vitamin A activity and the carotenoid content of fruits, 101, 43
- Smith, Margaret Cammack, and Lantz, Edith M.** The effect of the feeding of fluorides upon the chemical composition of the teeth and bones of albino rats, 101, 677
- and — The effect of fluorine upon the phosphatase content of plasma, bones, and teeth of albino rats, 112, 303
- and **Otis, Louise.** Hemoglobin regeneration at different levels of iron intake in rats made anemic in the presence of copper, 119, xcii
- Smith, Margaret Elizabeth, and Kik, M. C.** A micromethod for the determination of fatty acids from small amounts of whole blood, 103, 391
- Smith, Nathaniel L.** See DUNN, REDEMANN, and SMITH, 104, 511
- See DUNN, SMART, REDEMANN, and SMITH, 105, xxiii
- Smith, Paul K.** See NIMS and SMITH, 101, 401
- See BROOKE, SMITH, and SMITH, 104, 141
- and **Smith, Arthur H.** The acid-base balance in the serum of rats, with particular reference to the effects produced

Smith, Paul K.—*continued*

- by a diet low in inorganic constituents, 105, lxxxi
- and —. Electrolytes in the serum of the rat, 107, 673
- . See SMITH and SMITH, 107, 681
- . See LIGHT, SMITH, SMITH, and ANDERSON, 107, 689
- . See NIMS and SMITH, 109, lxx 113, 145
- , Trace, Jane, and Barbour, Henry G. The fate of deuterium in the mammalian body, 116, 371
- . See SMITH and SMITH, 117, 209 119, xci
- and Smith, Elizabeth R. B. Thermodynamic properties of solutions of amino acids and related substances. II. The activity of aliphatic amino acids in aqueous solution at twenty-five degrees, 121, 607
- , Taylor, Alice C., and Smith, Elizabeth R. B. Thermodynamic properties of solutions of amino acids and related substances. III. The ionization of aliphatic amino acids in aqueous solution from one to fifty degrees, 122, 109
- . See WINKLER and SMITH, 123, cxxx 124, 589
- Smith, Rachel M., and Marble, Alexander.** The colorimetric determination of free and combined cholesterol, 117, 673

- Smith, Willie W.** See BUNIM, SMITH, and SMITH, 118, 667
- and Smith, Homer W. Protein binding of phenol red, diodrast, and other substances in plasma, 124, 107
- Smolens, J.** See SEVAG, LACKMAN, and SMOLENS, 124, 425
- Smullen, George H.** See ROBERTS, TWEEDY, and SMULLEN, 112, 209
- . See TWEEDY, SMULLEN, and BELL, 116, 163
- Smyth, Elizabeth M.** See MEYER and PALMER, 114, 689
- . See MEYER, DUBOS, and SMYTH, 118, 71
- . See MEYER, SMYTH, and PALMER, 119, 73, lxix
- . See PALMER, SMYTH, and MEYER, 119, 491
- . See MEYER, PALMER, and SMYTH, 119, 501
- . See MEYER and SMYTH, 119, 507 123, lxxxiv
- Smythe, C. V.** See REINER, SMYTHE, and PEDLOW, 113, 75
- . See MICHAELIS and SMYTHE, 113, 717 114, lxx
- . The action of iodoacetate and iodoacetamide on certain sulfhydryl groups, on urease, and on fermentation, 114, xcv
- . The reaction of iodoacetate and of iodoacetamide with various sulfhydryl groups, with urease, and with yeast preparations, 114, 601

- . See MICHAELIS, SCHUBERT, and SMYTHE, 116, 587
- . Phosphoric acid esters from yeast extract. The isolation of a crystalline calcium salt consisting of an equimolar mixture of glucosemonophosphate and glycerophosphate, 117, 135
- . An improved method of preparing hexosemonophosphate from yeast extract, 118, 619
- . The aerobic utilization of pyruvic acid by bakers' yeast, 123, cxi
- . The utilization of pyruvic acid by bakers' yeast, 125, 635
- Snell, Cornelia T. The ultrafiltration of malt amylase solutions, 104, 43
- Snell, E. E., and Strong, F. M. The influence of riboflavin and certain synthetic flavins on the growth of lactic acid bacteria, 123, cxii
- Snider, Ruth H. See BLOOR and SNIDER, 105, x
- . 107, 459
- . 109, ix
- . The phospholipid fatty acids of muscle, 116, 503
- Snyder, Fred H. See CORLEY and SNYDER, 119, xx
- and Corley, Ralph C. Amino acid catabolism. V. The influence of structural configuration on the deamination of α -amino acids in the normal dog, 122, 491
- Snyder, J. C. A note on the use of the Haldane apparatus for the analysis of gases containing ether vapor, 122, 21
- Sobel, Albert E. See NATELSON, SOBEL, and KRAMER, 105, 761
- , Goldfarb, Abraham R., and Kramer, Benjamin. Studies of incurable rickets. II. Rôle of the "local factor" and of viosterol in the pathogenesis of rickets due to beryllium, 108, 395
- . See NATELSON and SOBEL, 109, 687
- . See DREKTER, SOBEL, and NATELSON, 114, xxviii
- , Drechter, I. J., and Natelson, Samuel. The quantitative isolation of small quantities of "free cholesterol" as the pyridine cholesteryl sulfate, 114, xevi
- , Pearl, Aaron, and Kramer, Benjamin. A micromethod for the determination of strontium and calcium in mixtures containing both, 114, xevii
- , Drechter, I. J., and Natelson, Samuel. Estimation of small amounts of cholesterol as the pyridine cholesteryl sulfate, 115, 381
- . See DREKTER, SOBEL, and NATELSON, 115, 391
- , Pearl, Aaron, Gerchick, Elias, and Kramer, Benjamin. A micromethod for the determination of strontium and calcium in mixtures containing both, 118, 47
- , Yuska, Henry, and Cohen, Julius. A convenient method of determining small amounts

- Sobel, Albert E.**—*continued*
 of ammonia and other bases
 by the use of boric acid, 118, 443
- and **Sklersky, Samuel.** A
 direct acidimetric microtitra-
 tion method for calcium, 122, 665
- Sobotka, Harry, and Glick,
 David.** Lipolytic enzymes.
 I. Studies on the mechanism
 of lipolytic enzyme actions, 105, 199
- and —. II. The influence of
 hydrogen ion concentration on
 activity of liver esterase, 105, 221
- , **Reiner, Miriam, and Weiner,
 S. B.** Sucrosuria, 123, cxii
- and **Bloch, Edith.** Built-up
 films of steroid compounds, 124, 559
- . See **BLOCH** and **SOBOTKA**, 124, 567
- . See **MARX** and **SOBOTKA**, 124, 693
- Somogyi, Michael.** The dis-
 tribution of sugar and rate
 of glycolysis in the blood of
 some mammals, 103, 665
- . The solubility and prepara-
 tion of phosphorus- and nitro-
 gen-free glycogen, 104, 245
- . The conversion products of
 starch and of glycogen in
 enzymic and acid hydrolysis, 105, lxxxii
- . Paradoxical ketosis, 114, xeviii
- . A reagent for the copper-
 iodometric determination of
 very small amounts of sugar, 117, 771
- . Detection and quantitative
 determination of small
 amounts of glucose in mix-
 tures containing maltose, 119, 741
- . Analysis of diastatic split-
 products of starch, 124, 179
- . Micromethods for the esti-
 mation of diastase, 125, 399
- Soskin, Samuel.** See **FREED,
 MIRSKY, and SOSKIN**, 112, 143
- Southgate, Harriet.** See **BUT-
 LER, BLATT, and SOUTHGATE**, 109, 755
- Soyenkoff, Basil C., and Hinck,
 Claus F., Jr.** The measure-
 ment of pH and acid-neutral-
 izing power of saliva, 109, 467
- Spadola, John M., and Ellis, N.
 R.** The effect of the inges-
 tion of cottonseed oil before
 and after hydrogenation on the
 composition of the body fat
 of the rat, 113, 205
- and **Riemenschneider, R. W.**
 The position of the unsatu-
 rated linkage in the hexa-
 decenoic acids of certain natu-
 ral fats, 121, 787
- Spencer, Howard C.** See **MOR-
 GULIS and SPENCER**, 114, lxxii
- . Microdetermination of col-
 lagen, 119, xcii
- , **Morgulis, Sergius, and
 Wilder, Violet M.** A micro-
 method for the determination
 of gelatin and a study of the
 collagen content of muscles
 from normal and dystrophic
 rabbits, 120, 257

- See MORGULIS, WILDER, SPENCER, and EPPSTEIN, 124, 755
- Sperry, Warren M., and Stoyanoff, V. A. The effect of paratyphoid infection and high and low cholesterol diets on tissue cholesterol in rats, 105, lxxxii
- See SCHOENHEIMER and SPERRY, 106, 745 107, 1
- See SCHOENHEIMER, SPERRY, and DAM, 109, lxxix
- and Schoenheimer, Rudolf. Cholesterol esterase in blood, 109, lxxxvi
- and —. A comparison of serum, heparinized plasma, and oxalated plasma in regard to cholesterol content, 110, 655
- Cholesterol esterase in blood, 111, 467
- The effect of tissue extracts on esterification of cholesterol in blood serum, 113, 599
- The relationship between total and free cholesterol in human blood serum, 114, 125, xcvi
- The effect of dextrose ingestion on the cholesterol fractions of the blood, 116, 65
- The concentration of total cholesterol in the blood serum, 117, 391
- and Stoyanoff, V. A. The influence of sodium glycocholate on the enzymatic synthesis and hydrolysis of cholesterol esters in blood serum, 117, 525
- The determination of cholesterol, 118, 377
- and Bergmann, Werner. The absorbability of sterols with particular reference to ostrea-sterol, 119, 171
- and Stoyanoff, V. A. The effect of bile salts on the enzymatic synthesis and hydrolysis of cholesterol esters in blood serum, 119, xciii
- and —. The influence of bile salts on the enzymatic synthesis and hydrolysis of cholesterol esters in blood serum, 121, 101
- and —. Further studies of the enzymatic synthesis and hydrolysis of cholesterol esters in blood serum, 123, cxiii
- Spiegel-Adolf, Mona, and Seibert, Florence B. Spectral absorption of purified tuberculin, 105, lxxxiii
- and —. Spectral analysis of purified tuberculin, 106, 373
- Further studies of polarization in tissue models, 114, xcix
- Ultraspectrographic studies on melanins, 123, cxiv
- Spielman, M. A. The chemistry of the lipids of tubercle bacilli. XXXIX. The constitution of tuberculostearic acid, 106, 87
- and Anderson, R. J. The chemistry of the lipids of tubercle bacilli. XLII. Studies on phthioic acid, 112, 759

- Spies, Tom D.** See **VILTER**,
SPIES, and **MATHEWS**,
125, 85
- Spoehr, H. A., and Milner,**
Harold W. Leaf starch: its
isolation and some of its prop-
erties, 111, 679
- and —. The starch isolated
from plant material by the
freezing method, 116, 493
- Sprinson, David B.** See **BAU-**
MANN, **SPRINSON**, and **METZ-**
GER,
102, 773
105, 269
- See **BAUMANN**, **METZGER**,
and **SPRINSON**, 105, ix
- See **BAUMANN**, **SPRINSON**,
and **METZGER**, 109, v
- See **BAUMANN** and **SPRIN-**
SON, 119, vii
- See **BAUMANN**, **SPRINSON**,
and **METZGER**, 119, viii
- Squires, Raymond B.** See
ANDERSON and **SQUIRES**,
124, 71
- Sreenivasaya, Motnahalli.** See
SRINIVASAN and **SREENIVA-**
SAYA, 105, 563
- Srinivasan, Mudambi, and**
Sreenivasaya, Motnahalli.
Dilatometric studies in the
hydrolysis of the 2,5-
diketopiperazines and poly-
peptides. I. Alkali hydrolysis
of glycine and alanine an-
hydrides, 105, 563
- Stadie, William C., and O'Brien,**
Helen. The catalysis of the
hydration of carbon dioxide
and dehydration of carbonic
acid by an enzyme isolated
from red blood cells,
103, 521
- and —. The carbamate-
carbon dioxide equilibrium of
amino acids, hemoglobin, and
serum proteins and its sig-
nificance in the carbon dioxide
transport of the blood,
109, lxxxvii
- and —. The carbamate
equilibrium. I. The equilib-
rium of amino acids, carbon
dioxide, and carbamates in
aqueous solution; with a note
on the Ferguson-Roughton
carbamate method,
112, 723
- and —. II. The equilibrium
of oxyhemoglobin and re-
duced hemoglobin, 117, 439
- See **JOSEPH** and **STADIE**,
123, lxv
- and **Jones, Maxwell.** The
effect of prostigmine on the
choline esterase activity of
human and guinea pig muscle
in relation to therapeutic mech-
anism of prostigmine in myas-
thenia gravis, 123, cxiv
- See **JOSEPH** and **STADIE**,
125, 795
- Stanley, W. M.** Chemical
studies on the virus of tobacco
mosaic. VII. An improved
method for the preparation of
crystalline tobacco mosaic
virus protein, 115, 673
- See **WYCKOFF**, **BISCOE**, and
STANLEY, 117, 57
- Chemical studies on the
virus of tobacco mosaic.
VIII. The isolation of a
crystalline protein possessing
the properties of aucuba mo-
saic virus, 117, 325

- . See LORING and STANLEY, 117, 733
- . Chemical studies on the virus of tobacco mosaic. IX. Correlation of virus activity and protein on centrifugation of protein from solution under various conditions, 117, 755
- . See LAVIN and STANLEY, 118, 269
- . Chemical studies on the virus of tobacco mosaic. X. The activity and yield of virus protein from plants diseased for different periods of time, 121, 205
- . See LAUFFER and STANLEY, 123, 507
- Stanley-Brown, Margaret. See CHARGAFF, BANCROFT, and STANLEY-BROWN, 115, 149, 155
116, 237
- Stare, F. J. See PHILLIPS and STARE, 104, 351
- . See ELVEHJEM, COHEN, and STARE, 105, xxv
- . See PHILLIPS, STARE, and ELVEHJEM, 106, 41
- . The preparation and some properties of liver flavin, 109, lxxxviii
- . The preparation and nutritional value of hepatoflavin, 111, 567
- . A potentiometric study of hepatoflavin, 112, 223
- Stark, Irene E. See COHEN and STARK, 123, xxiii
- and Cohen, Philip P. Effect of malonic acid on the reduction of acetoacetic acid to β -hydroxybutyric acid in sliced and homogenized liver under aerobic and anaerobic conditions, 123, cxv
- Starr, Isaac, Jr. See COOL, GAMBLE, and STARR, 105, 97
- Stavely, Homer E., Christensen, L. M., and Fulmer, Ellis I. Studies on yeast zymine. I. The effect of some electrolytes upon carbon dioxide production, 111, 771
- , — , and — . II. The effect of ethanol upon the production of carbon dioxide, 111, 785
- , — , and — . III. The effect of some electrolytes, and of ethanol, upon the phosphate content during fermentation, 111, 791
- Stearns, Genevieve, and Warweg, Edna. Studies of phosphorus of blood. I. The partition of phosphorus in whole blood and serum, the serum calcium and plasma phosphatase from birth to maturity, 102, 749
- . See BOYD, DRAIN, and STEARNS, 103, 327
- . The retention of calcium from early infancy to adolescence, 105, lxxxiv
- . See CATHERWOOD and STEARNS, 114, xviii
- and Jeans, P. C. The effect of the quantity of vitamin D intake upon calcium retention in infancy, 114, c
- . See WARWEG and STEARNS, 115, 567
- . See CATHERWOOD and STEARNS, 119, 201

- Stecher, Robert M. See DANIELSON and STECHER, 114, xxiii
- Steenbock, H. See BAUMANN and STEENBOCK, 101, 547, 561
- See BAUMANN, STEENBOCK, INGRAHAM, and FRED, 103, 339
- See KEMMERER and STEENBOCK, 103, 353
- See BAUMANN, STEENBOCK, BEESON, and RUPEL, 105, 167
- See SEMB, BAUMANN, and STEENBOCK, 107, 697
- See BAUMANN, RISING, and STEENBOCK, 107, 705
- , Irwin, Margaret House, and Weber, Janet. The comparative rate of absorption of various fats, 114, c
- , Semb, Joseph, and Van Donk, Evelyn C. Sexual differentiation in the storage of iron by the rat, 114, ci
- See HAMAN and STEENBOCK, 114, 505
- See QUACKENBUSH and STEENBOCK, 123, xcvi
- See QUACKENBUSH, STEENBOCK, and PETERSON, 123, xcvi
- See SCHNEIDER and STEENBOCK, 123, cv
- Stehle, Raymond L. A new method for separating pressor and oxytocic substances from the posterior lobe of the pituitary gland, 102, 573
- Stein, Harold J. See DAY, STEIN, and MCCOLLUM, 123, xxviii
- Stein, William H., and Miller, Edgar G., Jr. The composition of elastin, 125, 599
- Steinhardt, Jacinto. Properties of hemoglobin and pepsin in solutions of urea and other amides, 123, 543
- Solubility behavior of crystalline pepsin and other proteins, 123, cxv
- Stekol, Jakob A. Studies on cystinuric urine, 105, lxxxv
- and Cerecedo, Leopold R. Comparative studies on the metabolism of adult and growing dogs. Detoxication processes, 105, lxxxv
- Metabolism of *l*-cystine and *dl*-cystine in adult dogs maintained on a protein-free diet, 107, 225
- See CERECEDO and STEKOL, 107, 425
- Metabolism of *l*- and *dl*-cystine in growing dogs maintained on diets of various protein contents, 107, 641
- Metabolism of *l*- and *dl*-methionine in adult and growing dogs maintained on diets of various protein contents, 109, 147
- Metabolism of naphthalene in adult and growing dogs, 110, 463
- The determination of *p*-bromophenylmercapturic acid in the urine of the dog, 113, 279
- Comparative studies in the sulfur metabolism of the dog and pig, 113, 675

- . Studies on the mercapturic acid synthesis in animals. I. The extent of the synthesis of *p*-bromophenylmercapturic acid in dogs as affected by diets of varying sulfur content, 117, 147
- and Mann, Frank C. Studies on the mercapturic acid synthesis in animals. II. The rôle of bile in the absorption and detoxication of bromobenzene and naphthalene in the dog, 117, 619
- . Studies on the mercapturic acid synthesis in animals. III. The extent of the synthesis of *p*-bromophenylmercapturic acid in dogs as related to the time of administration of food and bromobenzene, 118, 155
- . The dependence of the extent of synthesis of *p*-bromophenylmercapturic acid in dogs on body weight, 119, xciv
- and Hamill, William H. On the non-labile deuterium of amino acids subjected to treatment in the medium of dilute deuterium oxide, 120, 531
- . Studies on the mercapturic acid synthesis in animals. V. The effect of naphthalene on the growth of rats as related to diets of varying sulfur content, 121, 87
- . VI. The dependence of the extent of the synthesis of *p*-bromophenylmercapturic acid in dogs on the body weight, 121, 93
- . VII. Bromobenzene and *l*-cystine in relation to growth of rats on a navy bean meal diet, 122, 55
- . VIII. *l*-Cystine, *dl*-methionine, glutathione, and taurine in relation to the synthesis of mercapturic acids in the rat, 122, 333
- . Glutathione in relation to growth of rats maintained on diets containing bromobenzene and naphthalene, 123, cxvi
- . Studies on the mercapturic acid synthesis in animals. IX. The conversion of benzyl chloride and S-benzylcysteine into benzylmercapturic acid in the organism of the dog, rabbit, and rat, 124, 129
- Stenbuck, Frederick A. See MALISOFF and STENBUCK, 115, 87
- Stephens, D. J., and Hawley, Estelle E. The partition of reduced ascorbic acid in blood, 115, 653
- Stern, Kurt G. The constitution of the prosthetic group of catalase, 112, 661
- . On the mechanism of enzyme action, 114, ci
- . On the mechanism of enzyme action. A study of the decomposition of monoethyl hydrogen peroxide by catalase and of an intermediate enzyme-substrate compound, 114, 473
- and DuBois, Delafield. A photoelectric method for recording fast chemical reactions and its application to the

Stern, Kurt G.—*continued*

- study of catalyst-substrate compounds, 116, 575
- and White, Abraham. Studies on the constitution of insulin. I. Properties of reduced insulin preparations, 117, 95
- See WHITE and STERN, 119, 215
- and White, Abraham. Studies on the constitution of insulin. Properties of —SH—insulin and the reaction of —S—S— insulin with ketene, 119, xcv
- On the absorption spectrum of catalase, 121, 561
- and DuBois, Delafield. A spectroscopic method for the kinetic study of rapid chemical reactions, 121, 573
- and White, Abraham. Studies on the constitution of insulin. III. The acetylation of insulin by ketene, 122, 371
- and Salomon, Kurt. On ovoverdin, the carotenoid-protein pigment of the egg of the lobster, 122, 461
- and Wyckoff, Ralph W. G. An ultracentrifugal study of catalase, 124, 573
- Sternberger, Helen R. See ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY, 109, xxx
- Stevens, Charles D. The source of the formic acid produced on acid hydrolysis of nucleic acids, 120, 751

- Stevenson, J. W. See BOYD and STEVENSON, 117, 491
122, 147
- Stiller, Eric T. See LEVENE and STILLER, 102, 187
104, 299
- See LEVENE, HARRIS, and STILLER, 105, 153
- See LEVENE and STILLER, 106, 421
- Stimmel, Benjamin F. See McCULLAGH and STIMMEL, 109, lxii
- and McCullagh, D. Roy. A note concerning the determination of iodine, 116, 21
- Stirn, F. E., Elvehjem, C. A., and Hart, E. B. The indispensability of zinc in the nutrition of the rat, 109, 347
- and Arnold, Aaron. The relation of dietary fat to the vitamin B₁ requirement of growing rats, 123, cxvii
- Stock, C. Chester, Perkins, Marie E., and Hellerman, Leslie. Activation of enzymes. IV. The jack bean argininolytic enzyme, 125, 753
- See HELLERMAN and STOCK, 125, 771
- Stoddard, M. Palmer. See DUNN, ROSS, and STODDARD 119, xxviii
- See DUNN and STODDARD, 121, 521
- Stodola, F. H. See ANDERSON, CROWDER, NEWMAN, and STODOLA, 113, 637
114, iii
- See CROWDER, STODOLA, and ANDERSON, 114, 431

- and Anderson, R. J. The chemistry of the lipids of tubercle bacilli. XLVI. Phthiocerol, a new alcohol from the wax of the human tubercle bacillus, 114, 467
- See ANDERSON, REEVES, and STODOLA, 121, 649
- Stoker, Ruth. See NELSON and STOKER, 114, lxxvi
- Stokstad, E. L. R. See ALMQUIST and STOKSTAD, 111, 105
- See KLOSE, STOKSTAD, and ALMQUIST, 123, 691
- and Manning, P. D. V. Evidence of a new growth factor required by chicks, 125, 687
- Stone, Gilbert C. H., and Failey, Crawford F. The activity coefficient of thalious chloride in protein systems, 105, lxxxvi
- Stoner, Neva. See ERICKSON, STONER, and MACY, 103, 235
- Storvick, Clare A. See SWANSON, STORVICK, and SMITH, 114, 309
- Stotz, Elmer. The determination of fumaric acid in protein solutions containing succinic acid, 118, 471
- and Hastings, A. Baird. The components of the succinate-fumarate-enzyme system, 118, 479
- , Harrer, Carter J., and King, C. G. A study of "ascorbic acid oxidase" in relation to copper, 119, xc, 511
- , —, Schultze, M. O., and King, C. G. Tissue respiration studies on normal and scorbutic guinea pig liver and kidney, 120, 129
- See SCHULTZE, STOTZ, and KING, 122, 395
- , Harrer, Carter J., Schultze, M. O., and King, C. G. The oxidation of ascorbic acid in the presence of guinea pig liver, 122, 407
- , Sidwell, A. E., Jr., and Hogness, T. R. Spectrophotometric determination of the equilibria between oxidation-reduction systems; the potential of cytochrome C, 123, cxviii
- , —, and —. The spectrophotometric determination of the equilibrium in oxidation-reduction systems; the potential of cytochrome C, 124, 11
- , —, and —. The rôle of the cytochromes in the action of "indophenol oxidase," 124, 733
- , Altschul, Aaron M., and Hogness, T. R. The cytochrome C-cytochrome oxidase complex, 124, 745
- Stoughton, Roger W. A method for the quantitative determination of phenols, 115, 293
- Stoyanoff, V. A. See SPERRY and STOYANOFF, 105, lxxxii
- 117, 525
- 119, xciii
- 121, 101
- 123, cxiii
- Strain, Harold H. Carotene. V. Formation of geronic acid

Strain, Harold H.—*continued*

- by ozonization of carotene, dihydrocarotene, and related compounds, 102, 137
- Ozonization of lycopene. Formation of levulinic acid and levulinic aldehyde, 102, 151
- Carotene. VIII. Separation of carotenes by adsorption, 105, 523
- IX. Carotenes from different sources and some properties of α - and β -carotene, 111, 85
- Eschscholtzxanthin: a new xanthophyll from the petals of the California poppy, *Eschscholtzia californica*, 123, 425

Strain, William H. See DOBRINER, LOCALIO, and STRAIN, 114, xxvi

Straup-Cope, Danella, and Cohn, Edwin J. Activity coefficients and rates of reaction in systems containing ions, zwitter ions, and uncharged molecules, 105, lxxxvii

Strauss, Margaret B. See BUELL and STRAUSS, 105, xiv

— See BUELL, ANDERSON, and STRAUSS, 114, xvi

— The use of thorium nitrate in the rapid ashing of serum and urine. I. Adapted for subsequent potassium determinations, 118, 331

Strayer, J. W. See CRIMM and STRAYER, 112, 511

Street, Harold R. See McCLENDON and STREET, 109, li

— A gravimetric technique for the determination of small amounts of plasma lipids, 116, 25

Strickler, H. S., and Wilson, D. A. The determination of blood iodine, 123, cxviii

— See WILSON, STRICKLER, and McELROY, 123, cxxix

Strong, F. M. See ELVEHJEM, MADDEN, STRONG, and WOOLLEY, 123, 137

— See SNELL and STRONG, 123, cxii

— See WOOLLEY, STRONG, and MADDEN, 123, cxxxi

— See WOOLLEY, STRONG, MADDEN, and ELVEHJEM, 124, 715

Stuart, Elmer H., Block, Richard J., and Cowgill, George R. The antineuritic vitamin. V. The preparation of a vitamin concentrate suitable for parenteral use, 105, 463

Stueck, George. See SHORE, WILSON, and STUECK, 112, 407

Sturges, Stuart. See KNUDSON, STURGES, and BRYAN, 123, lxx

Subbarow, Yellapragada, and Jacobson, B. M. Chemical studies of the pernicious anemia principle in liver, 114, cii

Sulkowitch, Hirsh W. A rapid microchemical method for the detection of lead in biological and other organic material with N,N'-diphenylformazyl mercaptan and N,N'-diphenyldihydroformazyl mercaptan, 105, lxxxviii

- Sullivan, M. X., and Hess, W. C.**
 Ergothioneine in the urine,
 102, 67
 — and —. Urinary studies in a
 case of progressive muscular
 dystrophy, 105, lxxxix
 —. See HESS and SULLIVAN,
 108, 195
 —. Further studies on muscular
 dystrophies, with reference to
 intoxication by guanidine and
 simple guanidine derivatives,
 109, lxxxix
 —, Hess, W. C., Hardy, J. I.,
 and Howe, Paul E. Com-
 parative study of the wool of
 lambs on adequate and in-
 adequate rations, 109, xc
 —. See HESS and SULLIVAN,
 114, xlix
 —. Further studies on muscular
 dystrophies, 114, ciii
 —, Hess, W. C., and Irreverre,
 Filadelfo. Studies in muscular
 dystrophies. The presence of
 simple guanidine derivatives
 in the urine, 114, 633
 — and —. The determination
 of cystine in urine, 116, 221
 —. An examination of the
 Sullivan colorimetric test for
 guanidine, 116, 233
 — and Hess, W. C. Improve-
 ments in methods of hydroly-
 sis of protein: shortening the
 time for estimating cystine,
 117, 423
 —. See HESS and SULLIVAN,
 119, xlvii
 — and Hess, W. C. The cystine
 content of insulin, 119, xcvi
 —, Howard, H. W., and Hess,
 W. C. The estimation of cys-

- tine in finger nail clippings
 with hydrolysis for one hour,
 119, 721
 — and Hess, W. C. The effect
 of aldehydes on the quantita-
 tive determination of cysteine
 and cystine, 120, 537
 —. See HESS and SULLIVAN,
 121, 323
 — and Hess, W. C. The effect
 of pyruvic acid on the estima-
 tion of cystine and cysteine,
 122, 11
 —. See HESS and SULLIVAN,
 123, lv
 —. Chemical studies in hyper-
 tension, 123, cxix
 —. See NEGLIA, HESS, and
 SULLIVAN, 125, 183
 —, Milone, H. S., and Everitt,
 E. L. A rapid procedure for
 estimating the tryptophane
 content of casein, 125, 471
Summerson, William H. See
 GOUDSMIT and SUMMERSON,
 111, 421
 —. The use of milk treated with
 hydrogen sulfide for the de-
 velopment of a copper
 deficiency in the rat,
 123, cxix
Sumner, James B. See HOWELL
 and SUMNER, 104, 619
 — and Howell, Stacey F. A
 method for determination of
 saccharase activity,
 108, 51
 — and —. A qualitative test
 for enzymes of the trypsin and
 papain types, 109, 429
 — and —. The isolation of a
 fourth crystallizable jack bean

Sumner, James B.—*continued*

- globulin through the digestion of canavalin with trypsin, 113, 607
- and —. The rôle of divalent metals in the reversible inactivation of jack bean hemagglutinin, 115, 583
- and Dounce, Alexander L. Does trypsin inactivate urease? 117, 713
- and —. Can crystalline urease be made to function as arginase? 119, xcvi
- and —. Crystalline catalase, 121, 417
- . See DOUNCE and SUMNER, 124, 415
- and Gralén, Nils. The molecular weight of crystalline catalase, 125, 33
- , —, and Eriksson-Quensel, Inga-Britta. The molecular weight of urease, 125, 37
- , —, and —. The molecular weights of canavalin, concanavalin A, and concanavalin B, 125, 45
- Sunderman, F. William, and Williams, Priscilla. The analysis of chloride in tissues, 102, 279
- . The measurement of serum volume, 109, xci
- . Studies in serum electrolytes. X. The water of serum and factors for the calculation of the molality of a solute in serum from the measurement of the specific gravity, 113, 111
- and Austin, J. Harold.

Method for measurement of serum volume, 114, ciii

- and Razek, Joseph. Spectrophotometric studies of the color of solutions. I. Selection and application of light filters in the analysis of blood sugar by the Benedict method and of cholesterol by the Liebermann-Burchard reaction, 114, civ
- and —. Spectrophotometric studies of the color development in the analysis of sugar by the Benedict method and of cholesterol by the Liebermann-Burchard reaction, 118, 397
- Supplee, G. C. See ANSBACHER and SUPPLEE, 105, 391
- , Ansbacher, S., and Bender, R. C. Photochemical phenomena involved in vitamin G (B₂) studies, 110, 365
- , Flanigan, G. E., Hanford, Zaida M., and Ansbacher, S. Lactoflavin, a possible contaminant of vitamin-free diets, 113, 787
- , Ansbacher, S., Bender, R. C., and Flanigan, G. E. The influence of milk constituents on the effectiveness of vitamin D, 114, 95
- Sure, Barnett, Kik, M. C., and Church, Anna E. The influence of fasting on the concentration of blood lipids in the albino rat, 103, 417
- , —, and Buchanan, Kathryn Sue. Technique for the study of tryptic-eruptic digestion of proteins, 108, 11

- , —, and —. Enzymatic efficiency in avitaminosis. I. Influence of vitamin B deficiency on tryptic and ereptic digestion of casein, 108, 19
 - , —, and —. II. Influence of vitamin B deficiency on efficiency of pancreatic lipase and esterase, 108, 27
 - and Jones, W. A. The rôle of vitamin B₁ in cardiovascular diseases, 119, xcvii
 - and DeWitt, James. Oxygen uptake of rat tissues in avitaminosis, 123, cxx
 - Sutton, T. S., Setterfield, H. E., and Krauss, W. E. Nerve degeneration in the albino rat (*Mus norvegicus albinus*) associated with vitamin A avitaminosis. The use of the polarizing microscope in diagnosing degenerative changes in the myelin sheath, 105, lxxxix
 - Svedberg, The. Sedimentation constants, molecular weights, and isoelectric points of the respiratory proteins, 103, 311
 - Svirbely, Joseph L. The effect of desiccated thyroid, α -dinitrophenol, and cortical hormone extract on the vitamin C content of some organs of the guinea pig fed graded doses of ascorbic acid, 111, 147
 - . Vitamin C studies in the rat and guinea pig, 116, 543
 - Swanson, Pearl P., Timson, Gladys H., and Frazier, Ernestine. Some observations on the physiological adjustment of the albino rat to a diet poor in salts when edestin is the source of dietary protein, 109, 729
 - , Storvick, Clare A., and Smith, Arthur H. Inorganic salts in nutrition. Changes in kidneys of rats fed a diet poor in inorganic constituents, 114, 309
 - Swanson, W. W. See IOB and SWANSON, 122, 485
 - Swartz, K. T., and Miller, C. O. The preparation of glucuronic acid from borneolglucuronic acid, 103, 651
 - Sweet, Marion H. See McAMIS and SWEET, 114, lxiv
 - Swenson, T. L. See BALLS and SWENSON, 106, 409
 - Swingle, W. W. See PFIFFNER, SWINGLE, and VARS, 104, 701
 - Swinney, Robert H. See HAFNER, SWINNEY, and WEST, 116, 691
 - Szabo, F. See MEZINCESCU and SZABO, 115, 131
 - Szczpinski, A. See SCHMIDT, SCHMULOVITZ, SZCZPINSKI, and WYLIE, 120, 705
- T
- Talbott, John H. Blood sugar and respiratory exchange during high carbohydrate ingestion, 109, xc
 - and Sherman, Jane M. Urate distribution in blood, 115, 36

Talbott, John H.—*continued*

- See DILL, TALBOTT, and
CONSOLAZIO, 118, 649
119, xxiii

Tashiro, Shiro. The nature of a
gastric ulcer-producing sub-
stance isolated from muscle,
119, xcviii

**Tauber, Henry, and Kleiner,
Israel S.** The chemical nature
of rennin, 104, 259

- See KLEINER and TAUBER,
104, 267

— and Kleiner, Israel S.
Studies on trypsin. II. The
effect of trypsin on casein,
104, 271

— and —. The inactivation of
pepsin, trypsin, and salivary
amylase by proteases,
105, 411

— and —. The reciprocal diges-
tion of pepsin and trypsin,
105, xc

— and —. The specificity of
 α -glucosidases, 105, xci

— and —. Some enzymes of
Solanum indicum, 105, 679

— See KLEINER and TAUBER,
106, 501

— Inhibitors of milk-curdling
enzymes, 107, 161

— and Kleiner, Israel S. A
method for the quantitative
determination of ascorbic acid
(vitamin C). The vitamin C
content of various plant and
animal tissues, 108, 563

—, —, and Mishkind, Daniel.
Ascorbic acid (vitamin C)
oxidase, 110, 211

— and —. An enzymic method

for the estimation of true
vitamin C, 110, 559

— The selective adsorption of
enzymes by cellulose,
113, 753

— The interaction of vitamin
B₁ in enzymic reactions,
123, 499

— The carboxylase enzyme
system, 125, 191

Taylor, A. R. See PFIFFNER,
VARs, and TAYLOR, 106, 625

— See VARs, TAYLOR, and
PFIFFNER, 106, 639

Taylor, Alice C. See SMITH,
TAYLOR, and SMITH,
122, 109

Taylor, F. A., and Levene, P. A.
On the cerebronic acid frac-
tion. II, 102, 535

Taylor, Henry L. See KEYS and
TAYLOR, 109, 47, 55

— See LOGAN and TAYLOR,
119, 293, lxiv
125, 377, 391

Taylor, Ivon R. See MITCHELL
and TAYLOR, 105, lxii

— See CRESCITELLI and
TAYLOR, 108, 349

Taylor, J. P. See SUNDERMAN,
113, 111

Taylor, M. W. See RUSSELL,
TAYLOR, and WILCOX,
105, lxxiv
107, 735

— See RUSSELL, TAYLOR, and
DUNCAN, 119, lxxxv

Teller, George L. Evidence con-
cerning two types of plant
diastase, 114, 425

Templeton, R. D. See TWEEDY,
TEMPLETON, and MCJUNKIN,
109, xcii

- . See TWEEDY, McNAMARA, TEMPLETON, and PATRAS, 119, xcix
- Ten Broeck, Carl. The differentiation of trypsin by means of the anaphylactic test, 106, 729
- Tendeloo, H. J. C. A new and easy method for the potentiometric determination of calcium concentrations in solutions, 113, 333
- . The use of crystals as calcium electrodes, 118, 253
- Tendick, F. H. See DOX, BYWATER, and TENDICK, 112, 425
- Tennant, Robert. See THOMPSON, TENNANT, and WIES, 108, 85
- Teorell, Torsten. A method of studying conditions within diffusion layers, 113, 735
- Thannhauser, S. J., and Reichel, Max. Studies on animal lipids. X. The nature of cerebroside. Its relation to the splitting of polydiaminophosphatide by polydiaminophosphatase, 113, 311
- and Setz, Paul. Studies on animal lipids. XI. The reineckate of the polydiaminophosphatide from spleen, 116, 527
- and — . XII. A method for quantitative determination of diaminophosphatide in organs and fluids. Application to stromata of red blood cells and serum, 116, 533
- , Reichel, Max, and Grattan, Jerome F. Studies on serum phosphatase activity. I. Ascorbic acid activation on serum phosphatase, 121, 697
- , — , — , and Maddock, Stephen J. Studies on serum phosphatase activity. II. The effect of experimental total biliary obstruction on the serum phosphatase activation in dogs and cats, 121, 709
- , — , — , and — . III. The effect of complete biliary fistula on phosphatase activity in serum and bile, 121, 715
- , — , — , and — . IV. The deactivating effect of thiol compounds and bile acids on serum phosphatase activity *in vitro* and *in vivo*, 121, 721
- , — , — , and — . V. Studies concerning increased serum phosphatase values in disease, 121, 727
- , — , — , and — . VI. The influence of sera with high phosphatase activity on normal sera, 124, 631
- Thayer, Sidney A. See MACCORQUODALE, LEVIN, THAYER, and DOISY, 101, 753
- . See MACCORQUODALE, LEVIN, and THAYER, 105, lv
- . See CURTIS, MACCORQUODALE, THAYER, and DOISY, 107, 191
- . See MACCORQUODALE, THAYER, and DOISY, 109, lviii
- , MacCorquodale, D. W., 115, 435

Thayer, Sidney A.—*continued*

McKee, R. W., and Doisy, Edward A. The biological assay of the antihemorrhagic factor (vitamin K),

123, cxx

— See WESTERFELD, MAC-CORQUODALE, THAYER, and DOISY,

123, cxxvi

Thimann, Kenneth V. On the plant growth hormone produced by *Rhizopus suinus*,

109, 279

— See KOEPFLI, THIMANN, and WENT,

122, 763

Thomas, Byron H. See ECK, THOMAS, and YODER,

117, 655

— See ECK and THOMAS,

119, 621, 631

Thomas, G. Wilson. See EVERSOLE, FORD, and THOMAS,

104, 107

Thomas, Lloyd E. The stabilization of color in the determination of histidine by the diazo method and arginine by Weber's method (Sakaguchi reaction),

123, cxxi

Thomas, Rachel. See MORGAN, KIMMEL, THOMAS, and SAMISCH,

106, 531

Thompson, R. B. See HELLER, PAUL, and THOMPSON,

106, 357

Thompson, Richard. See MEYER, THOMPSON, PALMER, and KHORAZO,

113, 303

— See MEYER, PALMER, THOMPSON, and KHORAZO,

113, 479

Thompson, Robert H. S. See DUBOS and THOMPSON,

124, 501

— and Dubos, René J. The isolation of nucleic acid and nucleoprotein fractions from pneumococci,

125, 65

— See LAVIN, THOMPSON, and DUBOS,

125, 75

Thompson, William R., Tennant, Robert, and Wies, Carl H. Studies in starch amylase viscosimetry. I. A sensitive precision method for the estimation of amylolytic activity applicable to human serum,

108, 85

— A note on the preparation of starch substrates for amylase determinations,

109, 201

— See PAGE, KIRK, LEWIS, THOMPSON, and VAN SLYKE,

111, 613

— See KIRK, LEWIS, and THOMPSON,

111, 641

Thomson, K. B., and Lee, William C. The application of spectrographic analysis to the quantitative determination of sodium, potassium, calcium, and magnesium in biological fluids,

118, 711

Tidwell, Herbert C., and Holt, L. Emmett, Jr. The estimation of the total lipids and the lipid partition in feces,

112, 605

Timm, O. K. See OLMSTED, CURTIS, and TIMM,

108, 645

Timson, Gladys H. See SWANSON, TIMSON, and FRAZIER,

109, 729

- Tipson, R. Stuart. See LEVENE
and TIPSON, 101, 529
104, 385
105, 419
106, 113, 603
109, 623
111, 313
115, 731
120, 607
- A note on the acridine salts
of "yeast" and "muscle"
adenylic acids, 120, 621
- See LEVENE and TIPSON,
121, 131
- See LEVENE, TIPSON, and
KREIDER, 122, 199
- The preparation of 3,4,5-
trimethyl *l*-galactonic acid,
125, 341
- See LEVENE and TIPSON,
125, 345, 355
- Tischer, A. O. The nature of
vitamin A in cod liver oil,
125, 475
- Titus, Harry W. See CALVERY
and TITUS, 105, 683
- See BURROWS, FRITZ, and
TITUS, 110, 39
- Todd, T. Wingate. See HUN-
SCHER, HUMMEL, MACY, TODD,
and FRANCIS, 119, lii
- Toennies, Gerrit. See LAVINE
and TOENNIES, 101, 727
- and Lavine, Theodore F.
The oxidation of cystine in
non-aqueous media. III.
Products of exhaustive oxy-
genation of cystine perchlorate
in acetonitrile, 105, 107
- and —. IV. The course of
non-hydrolytic oxygenation,
105, 115
- and Bennett, Mary A.
Studies on the hydrolysis of
wool and the isolation of
cystine from hydrolysates,
105, xcii
- and Elliott, Margaret. The
precipitation of *l*-, *dl*-, and *m*-
cystine by phospho-12-
tungstic acid, 105, xciii
- See LAVINE and TOENNIES,
109, liii
- and Elliott, Margaret. The
precipitation of *l*-, *dl*-, and
m-cystine by phospho-12-
tungstic acid, 111, 61
- and Bennett, Mary A. Some
observations on the isolation
of cystine from wool hydroly-
sates, 112, 39
- , Lavine, Theodore F., and
Bennett, Mary A. The
specific rotation of *l*-cystine in
relation to degree of neu-
tralization and pH, 112, 493
- and Bennett, Mary A. Deter-
mination of the stereochemical
purity of *l*-cysteine, 112, 497
- and Lavine, Theodore F.
The oxidation of cystine in
non-aqueous media. V. Iso-
lation of a disulfoxide of *l*-
cystine, 113, 571
- The alleged formation of δ
sulfenic acid by the oxidator
of cystine with dithiofor-
mamidine, 119, xci
- Relations of thiourea, cys-
teine, and the corresponding
disulfides, 120, 29
- Oxidation of cysteine i
non-aqueous media. Th
"sulfenic acid" as the primar
oxidation product, 122, 2
- and Callan, Thomas P. O

- the perchloric-acetic acid method of amino acid titration, 125, 259
- Toepfer, E. W., and Sherman, H. C. The effect of liberal intakes of calcium or calcium and phosphorus on growth and body calcium, 115, 685
- Tolle, Chester D. See KLINE, TOLLE, and NELSON, 123, lxi
- Tomey, L. F. See GUERRANT, DUTCHER, and TOMEX, 110, 233
- Tomiyama, Tetuo. The apparent dissociation constants of canavanine and canaline, 111, 45
- . On the nature of the reaction which takes place between certain amino acids and formaldehyde, 111, 51
- Toothill, Martha C. See SHERMAN, MENDEL, and SMITH, 113, 247, 265
- Torrance, Calvin C. The effect of diphtheria toxin upon vitamin C *in vitro*, 121, 31
- Toscani, Vincent. See MILHORAT and TOSCANI, 114, 461
- Totter, John R., and Berg, Clarence P. The influence of optical isomerism on the utilization of amino acids by the mouse for growth, 123, cxxii
- Towle, L. W. See NUGENT and TOWLE, 104, 395
- Trace, Jane. See SMITH, TRACE, and BARBOUR, 116, 371
- Treadwell, Carleton R. See ECKSTEIN and TREADWELL, 112, 373
- Tressler, D. K. See MACK and TRESSLER, 118, 735
- Trevorow, Virginia, and Fashena, Gladys J. The determination of iodine in biological material, 110, 29
- . See FASHENA and TREVOROW, 114, 351
- Trimble, Harry C. See MADDOCK, TRIMBLE, and CAREY, 103, 285
- and Maddock, Stephen J. The rate of absorption of glucose from the intestine of the dog, 107, 133
- and —. The effect of hepatectomy upon the non-protein nitrogen metabolism of Dalmatian dogs, 123, cxxiii
- . See KLEMPERER, TRIMBLE, and HASTINGS, 125, 445
- Tripp, John T., and Corley, Ralph C. The disposal of brominated and phenylated fatty acids in the animal body, 105, xciv
- . See CORLEY, TRIPP, and NEWTON, 109, xxiii
- Tucker, Helen F., and Eckstein, H. C. The effect of supplementary methionine and cystine on the production of fatty livers by diet, 121, 479
- Tucker, I. W. See BALLS, MATTACK, and TUCKER, 122, 125
- Tufts, Elma V. See GREENBERG and TUFTS, 105, xxxii
- , 109, xxxviii
- . See GREENBERG, ANDERSON, and TUFTS, 111, 561
- . See GREENBERG and TUFTS, 114, 135

- . See GREENBERG, ANDERSON, and TUFTS, 114, xliii
- . See GREENBERG and TUFTS, 119, xl
- and Greenberg, David M. The biochemistry of magnesium deficiency. I. Chemical changes resulting from magnesium deprivation, 122, 693
- and — . II. The minimum magnesium requirement for growth, gestation, and lactation, and the effect of the dietary calcium level thereon, 122, 715
- Tulane, Victor J., Christman, A. A., and Lewis, Howard B. Studies in the synthesis of hippuric acid in the animal organism. VIII. Hydrazine intoxication and hippuric acid synthesis in the rabbit, 103, 141
- and Lewis, Howard B. Studies in the synthesis of hippuric acid in the animal organism. IX. A comparative study of the rate of synthesis and excretion of hippuric and phenaceturic acids by the rabbit, 103, 151
- Tunison, A. V. See McCAY, TUNISON, CROWELL, and PAUL, 114, 259
- . See McCAY and TUNISON, 123, lxxx
- Tupikova, Natalia. See EICHELBERGER and HASTINGS, 118, 197
- Turner, C. W. See BERGMAN and TURNER, 118, 247 120, 21
- . See GRAHAM, HOUCHIN, and TURNER, 120, 29
- . See GRAHAM, PETERSON, HOUCHIN, and TURNER, 122, 275
- . See BERGMAN and TURNER, 123, 471
- Turner, Kenneth B. See SHILLITO, BIDWELL, and TURNER, 112, 551
- Turner, Mary E. The precipitation of phosphatides and cholesterol from human sera, 105, xciv
- Turner, R. G. The stability of carotene in olive oil, 105, 443
- Turner, William A. See MEIGS, TURNER, KANE, and SHINN, 105, lx
- , Meigs, Edward B., and Converse, H. T. Toxic effect of cod liver oil in the ration of the rabbit and the calf, 114, civ
- Turner, William J. Studies on porphyria. I. Observations on the fox-squirrel, *Sciurus niger*, 118, 519
- Tweedy, Wilbur R., Bell, William P., and Vicens-Rios, Christobal. Parathyroid hormone potency as affected by oxidizing and reducing agents, 105, xcv
- , —, and — . Further chemical studies on a parathyroid hormone, 108, 105
- , Templeton, R. D., and McJunkin, F. A. The effect of complete and partial renal insufficiency on the action of parathyroid hormone in the dog, 109, xcii

Tweedy, Wilbur R.—*continued*

— See ROBERTS, TWEEDY, and SMULLEN, 112, 209

—, Smullen, George H., and Bell, William P. The action of acid and alkali on parathyroid hormone, 116, 163

—, McNamara, E. W., Templeton, R. D., and Patras, Mary C. The effect of calciferol on the serum calcium level in the nephrectomized and in the thyroparathyroidectomized-nephrectomized rat, 119, xcix

Tyler, David B. See DEUEL, MURRAY, HALLMAN, and TYLER, 120, 277

Tyndale, H. H. See LEVIN and TYNDALE, 109, liv

Tyner, James. See HUBBARD, MUNFORD, and TYNER, 101, 781

U

Underhill, Frank P., and Jaleski, Thomas C. The calcium and potassium content of dog tissues and the influence of thyro-parathyroidectomy, 101, 11

Underwood, E. J., and Elvehjem, C. A. Is cobalt of any significance in the treatment of milk anemia with iron and copper? 124, 419

Ungley, C. C. See DAKIN, UNGLEY, and WEST, 115, 771

Upham, Elizabeth. See LAN-DAUER, UPHAM, and RUBIN, 108, 121

Urban, Frank. Spectrographic

study of the cytochromes in yeast cells respiring at different temperatures, 109, xciii

— and Peugnet, Hubert B. Oscillographic study of the cytochromes during muscular contraction, 119, c

V

Vahlteich, Ella McCollum. See ROSE, VAHLTEICH, and MAC-LEOD, 104, 217

Van Donk, Evelyn C. See STEENBOCK, SEMB, and VAN DONK, 114, ci

Van Etten, Cecil. See DU VIGNEAUD, SEALOCK, and VAN ETTEN, 112, 451

Van Slyke, Donald D., and Kugel, Victor H. The use of Somogyi's filtrate to increase the specificity of the gasometric blood sugar method, 102, 51

— and —. Improvements in manometric micro-Kjeldahl and blood urea methods, 102, 489

— and Hiller, Alma. Determination of ammonia in blood, 102, 499

— and Sendroy, Julius, Jr. Studies of gas and electrolyte equilibria in blood. XVII. The effect of oxygenation and reduction on the carbon dioxide absorption curve and the pK' of whole blood, 102, 505

—, Page, Irvine H., and Kirk, Esben. A manometric micro-method for determination of carbon in organic compounds, 102, 635

- and **Kirk, Esben**. Comparison of gasometric, colorimetric, and titrimetric determinations of amino nitrogen in blood and urine, 102, 651
- See **Kirk, Page, and Van Slyke**, 105, xlvii
- , **Dillon, Robert T., and Margaria, Rodolfo**. Studies of gas and electrolyte equilibria in blood. XVIII. Solubility and physical state of atmospheric nitrogen in blood cells and plasma, 105, 571
- See **Sendroy, Dillon, and Van Slyke**, 105, 597
- See **Kirk, Page, and Van Slyke**, 106, 203
- See **Sendroy, Seelig, and Van Slyke**, 106, 463, 479
- See **Page, Kirk, Lewis, Thompson, and Van Slyke**, 111, 613
- See **Miller and Van Slyke**, 114, lxxi, 583
- Van Winkle, Walton, Jr.** See **Davis and Van Winkle**, 104, 207
- Vars, Harry M.** See **Pfiffner, Swingle, and Vars**, 104, 701
- Blood studies on fish and turtles, 105, 135
- See **Wintersteiner, Vars, and Pfiffner**, 105, c
- See **Pfiffner, Vars, and Taylor**, 106, 625
- , **Taylor, A. R., and Pfiffner, J. J.** Extraction studies on the adrenal cortical hormone. II. Yield from glands of various species, 106, 639
- See **Pfiffner and Vars**, 106, 645
- See **Pfiffner, Wintersteiner, and Vars**, 111, 585
- Velick, Sidney F., and White, Julius**. The synthesis of dicholylcystine and related substances, 123, cxxiii
- Venning, Eleanor Hill**. Gravitric method for the determination of sodium pregnane-diol glucuronide (an excretion product of progesterone), 119, 473
- , **Evelyn, Kenneth A., Harkness, E. V., and Browne, J. S. L.** The determination of estrin in urine with the photoelectric colorimeter, 120, 225
- Vicens-Rios, Christobal**. See **Tweedy, Bell, and Vicens-Rios**, 105, xcvi, 108, 105
- Vickers, Percy**. See **Eagle and Vickers**, 114, 193
- Vickery, Hubert Bradford, and White, Abraham**. The basic amino acids of casein, 103, 413
- and **Gordon, William G.** Complex compounds formed by certain amino acids in the presence of mercuric chloride and alkali, 103, 543
- See **Pucher, Vickery, and Wakeman**, 105, lxxviii
- , **Pucher, George W., and Clark, Harold E.** The preparation of glutamine, 109, 39
- and —. Glutamine and asparagine in tobacco leaves, 113, 157

Vickery, Hubert Bradford—*continued*

- See PUCHER, SHERMAN, and VICKERY, 113, 235
- See PUCHER, CLARK, and VICKERY, 117, 599, 605
- , Pucher, George W., Wakeman, Alfred J., and Leavenworth, Charles S. The metabolism of amides in green plants. I. The amides of the tobacco leaf, 119, 369
- See PUCHER, WAKEMAN, and VICKERY, 119, 523
- See PUCHER, CURTIS, and VICKERY, 123, 61, 71
- , Pucher, George W., Leavenworth, Charles S., and Wakeman, Alfred J. The metabolism of amides in green plants. II. The amides of the rhubarb leaf, 125, 527
- du Vigneaud, Vincent, Dyer, Helen M., and Harmon, J. The growth-promoting properties of homocystine when added to a cystine-deficient diet and the proof of structure of homocystine, 101, 719
- See LORING and DU VIGNEAUD, 102, 287
- , Sifferd, Robert H., and Seacock, Robert Ridgely. The heat precipitation of insulin, 102, 521
- See LORING, DORFMANN, and DU VIGNEAUD, 103, 399
- , Craft, Harold A., and Loring, Hubert S. The oxidation of the stereoisomers of cystine in the animal body, 104, 81
- and —. The oxidation of the

- sulfur of homocystine in the animal body, 105, xcvi
- , Loring, Hubert S., and Craft, Harold A. The oxidation of the sulfur of homocystine, methionine, and S-methylcystine in the animal body, 105, 481
- , Dyer, Helen M., Jones, Chase Breese, and Patterson, Wilbur I. The synthesis of pentocystine and homomethionine, 106, 401
- See LORING and DU VIGNEAUD, 107, 267
- , Loring, Hubert S., and Craft, Harold A. The oxidation of the sulfur of the acetyl and formyl derivatives of *d*- and *l*-cystine in the animal body, 107, 519
- See DYER and DU VIGNEAUD, 108, 73
- See SIFFERD and DU VIGNEAUD, 108, 753
- and Patterson, Wilbur I. The preparation of the optically active isomers of homocystine and the demonstration of their configurational relationship to naturally occurring methionine, 109, 97
- See DYER and DU VIGNEAUD, 109, 477
- and Irish, Oliver J. The rôle of the acetyl derivative as an intermediary stage in the biological synthesis of amino acids from keto acids, 109, xciv
- See LORING and DU VIGNEAUD, 111, 385
- See PATTERSON and DU VIGNEAUD, 111, 393

- . See RIEGEL and DU VIGNEAUD, 112, 149
- , Sealock, Robert Ridgely, and Van Etten, Cecil. The question of the utilization of tryptophane administered subcutaneously, 112, 451
- and Hunt, Madison. The synthesis and depressor effect of *d*-carnosine, the enantiomorph of the naturally occurring form, 114, cv
- and Patterson, Wilbur I. The synthesis of djenkolic acid, 114, 533
- and Hunt, Madison. The synthesis of *d*-carnosine, the enantiomorph of the naturally occurring form, and a study of its depressor effect on the blood pressure, 115, 93
- . See DYER and DU VIGNEAUD, 115, 543
- . See PATTERSON, DYER, and DU VIGNEAUD, 116, 277
- and Miller, Gail Lorenz. A synthesis of glutathione, 116, 469
- and Behrens, Otto K. A method for protecting the imidazole ring of histidine during certain reactions and its application to the preparation of *l*-amino-*N*-methylhistidine, 117, 27
- , Sifferd, Robert H., and Irving, George W., Jr. The utilization of *l*-carnosine by animals on a histidine-deficient diet, 117, 589
- . See MILLER and DU VIGNEAUD, 118, 101
- , Loring, Hubert S., and Miller, Gail Lorenz. The synthesis of α -glutamylcysteinylglycine (isoglutathione), 118, 391
- , Dyer, Helen M., and Jones, Chase Breese. Studies of the physiological behavior of the acetyl derivatives of the optical isomers of homocystine; a biological proof of their stereostructure, 119, 47
- . See JONES and DU VIGNEAUD, 120, 11
- . See BEHRENS and DU VIGNEAUD, 120, 517
- and Irish, Oliver J. The rôle of the acetyl derivative as an intermediary stage in the biological synthesis of amino acids from keto acids, 122, 349
- , Irving, George W., Jr., Dyer, Helen M., and Sealock, Robert Ridgely. Electrophoresis of posterior pituitary gland preparations, 123, 45
- . See PATTERSON and DU VIGNEAUD, 123, 327
- . See IRVING and DU VIGNEAUD, 123, 485
- . See HUNT and DU VIGNEAUD, 123, lxi
- , 124, 699
- and Hunt, Madison. A preliminary study of β -*l*-aspartyl-*l*-histidine as a possible biological precursor of *l*-carnosine, 125, 269
- Vilter, S. P., Spies, Tom D., and Mathews, A. P. A method for the determination of nicotinic acid, nicotinamide, and possibly other pyridine-like substances in human urine, 125, 85

- Virtue, Robert W., and Lewis, Howard B. The metabolism of sulfur. XXI. Comparative studies of the metabolism of *l*-cystine and *dl*-methionine in the rabbit, 104, 59
- and —. The iodometric determination of cystine in the urine, 104, 415
- . Studies on the metabolism of sulfur in cats, 114, cvi
- and Doster-Virtue, Mildred E. Precursors of taurocholic acid, 119, ci
- and —. Studies on the production of taurocholic acid in the dog, 119, 697
- and —. Studies on cystamine in the dog, 123, cxxiii
- Visscher, J. P. See Bowman, Visscher, and Mull, 109, xi
- Visscher, Maurice B. See Dillman and Visscher, 103, 791
- Volk, Marie C. See Gilligan, Volk, and Altschule, 103, 745
- Vollmar, G. K., and Koehler, Alfred E. The effect of insulin on liver glycogenase, 114, cvi
- W
- Waddell, J. The provitamin D of cholesterol. I. The antirachitic efficacy of irradiated cholesterol, 105, 711
- Wade, Nelson J. Prolonged administration of theelin and theelol to male and female rats and the bearing on reproduction, 105, xcvi
- See Katzman, Wade, and Doisy, 114, lvi
- Wadsworth, Augustus, and Pangborn, Mary C. The reaction of formaldehyde with amino acids, 116, 423
- Wagner, B. See Morgulis, 123, 1
- Wagreich, Harry, and Nelson, J. M. On the oxidation product of catechol when oxidized by means of tyrosinase, 115, 459
- Waisman, Harry A. See Mickelsen, Waisman, and Elvehjem, 124, 313
- See Woolley, Waisman, Mickelsen, and Elvehjem, 125, 715
- Wakefield, E. G. See Power, Wakefield, and Peterson, 105, lxvii
- See Power and Wakefield, 123, 665
- Wakeham, Glen, and Halenz, H. F. The distribution of iron in certain tissues of normal and anemic albino rats, 115, 429
- Wakeman, Alfred J. See Pucher, Vickery, and Wakeman, 105, lxviii
- See Vickery, Pucher, Wakeman, and Leavenworth, 119, 369
- See Pucher, Wakeman, and Vickery, 119, 523
- See Vickery, Pucher, Leavenworth, and Wakeman, 125, 527
- Wald, George, and Zussman, Hyman. Carotenoids of the chicken retina, 122, 449

- Walker, Arthur M.** See RICHARDS, BORDLEY, and WALKER, 101, 179
- and Reisinger, John A. Quantitative studies of the composition of glomerular urine. IX. The concentration of reducing substances in glomerular urine from frogs and *Necturi* determined by an ultramicroadaptation of the method of Sumner. Observations on the action of phlo-rhizin, 101, 223
- Quantitative studies of the composition of glomerular urine. X. The concentration of inorganic phosphate in glomerular urine from frogs and *Necturi* determined by an ultramicromodification of the Bell-Doisy method, 101, 239
- Comparison of the chemical composition of aqueous humor, cerebrospinal fluid, lymph, and blood from frogs, higher animals, and man. Reducing substances, inorganic phosphate, uric acid, urea, 101, 269
- Wallen-Lawrence, Zonja.** Proof of the existence of a follicle-stimulating and a luteinizing hormone in the anterior lobe of the pituitary body, 105, xcvi
- Wallenmeyer, J. C.** See BILLS, IMBODEN, and WALLENMEYER, 105, x
- See BILLS, McDONALD, MASSENGALE, IMBODEN, HALL, HERGERT, and WALLENMEYER, 109, vii
- See BILLS and WALLENMEYER, 123, xi
- Waller, Dorothy S.** See WILEY, WILEY, and WALLER, 101, 73
- Walter, E. D.** See BURRELL and WALTER, 108, 55
- Walti, A.** Crystalline ficin, 119, ci
- Wang, Cheng-Fah.** See WU and WANG, 123, 439
- Wang, Chi Che, Kaucher, Mildred, and Wing, Mary.** Mineral metabolism of twenty-three adolescent girls, five nephrotic children, and two boys with progressive pseudohypertrophic muscular dystrophy, 109, xev
- Improvements in the methods for calcium determination in biological material, 111, 443
- Basal metabolism, preformed and total creatinine nitrogen in twenty-four boys and forty-six girls between one month and fifteen years of age, 119, cii
- Warner, E. D.** See SEEGERs, SMITH, WARNER, and BRINKHOUS, 123, 751
- Warner, Robert C.** See BOR-SOOK, DAVENPORT, JEFFREYS, and WARNER, 117, 237
- Warren, Clark R.** See LIGHT and WARREN, 104, 121
- Warweg, Edna.** See STEARNS and WARWEG, 102, 749
- and Stearns, Genevieve. Studies of phosphorus of blood. V. A comparative study of acid and enzymatic hydrolysis

- of the acid-soluble organic phosphorus, with particular reference to the phosphoglycerate fraction, 115, 567
- Washburn, R. G. See KRAUSS and WASHBURN, 114, 247
- Waterman, Robert E., and Ammerman, Marion. Animal response to crystalline vitamin B₁, 105, xcvi
- Waters, E. T. See FLETCHER and WATERS, 119, xxxiii
- Waters, R. M. See ORCUTT and WATERS, 117, 509
- Watrous, R. M. See KOHN and WATROUS, 124, 163
- Watson, Cecil James. An improved method for the isolation of crystalline stercobilin, 105, 469
- The origin of natural crystalline urobilin (stercobilin), 114, 47
- Watson, M. See MARRIAN, COHEN, and WATSON, 109, lix
- Watts, Ruth M. The effect of administration of preparations of growth hormone of the anterior lobe of the pituitary upon gestation and the weight of the new-born (albino rats), 109, xcv
- Weber, C. J. The presence of glycocyamine in urine, 109, xcvi
- Studies on the metabolism of guanidoacetic acid, 114, cvii
- A study of the guanidine-like substance in the blood from dogs having uranium nephritis, 123, cxxiv
- Weber, H. H. R., and King, C. G. Specificity and inhibition characteristics of liver esterase and pancreas lipase, 108, 131
- Weber, Janet. See STEENBOCK, IRWIN, and WEBER, 114, c
- Webster, G. W. See FLOSDORF and WEBSTER, 121, 353
- Webster, M. Dorothy. See BERNHEIM, BERNHEIM, and WEBSTER, 109, vi
- and Bernheim, Frederick. Oxidation of amino acids by *Bacillus pyocyaneus* (*Pseudomonas aeruginosa*), 114, 265
- See BERNHEIM and WEBSTER, 119, xi
- Weech, A. A., Reeves, E. B., and Goettsch, E. The relationship between specific gravity and protein content in plasma, serum, and transudate from dogs, 113, 167
- See CULBERT, McCUNE, and WEECH, 119, 589
- See PAGE, FARR, and WEECH, 121, 111
- Weil, Leopold. The preparation of enzymatically pure proteinase and the quantitative determination of the influence of protaminase, 105, 291
- and Russell, Mary A. A manometric micromethod for arginase determination. Enzymatic study of blood arginase in rats, 106, 505
- See SCHROEDER, MUNRO, and WEIL, 110, 181
- The activation of arginase, 110, 201

- and Ely, J. Owen. Investigations in enzymatic histochemistry. I. Distribution of arginase activity in rabbit kidney, 112, 565
- Weinbach, Ansel P. A micro-method for the determination of sodium, 110, 95
- Weiner, Joseph G. See DUNN and WEINER, 117, 381
- Weiner, S. B. See SOBOTKA, REINER, and WEINER, 123, cxii
- Weinstein, S. S., and Wynne, A. M. Studies on pancreatic lipase. I, 112, 641
- and —. II. Influence of various compounds on the hydrolytic activity, 112, 649
- Weir, E. G., and Hastings, A. Baird. The ionization constants of calcium proteinate determined by the solubility of calcium carbonate, 114, 397
- Weisiger, James. See CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER, 123, xx
- Weiss, Alter. See FISHBERG, BIERMAN, and WEISS, 114, xxxv
- Weiss, Charles, Kaplan, A., and Larson, Clarence E. Studies on inflammation. III. Proteinase and peptidase activity of polymorphonuclear leucocytes, monocytes, and epithelioid cells of pleural inflammatory exudates, 125, 247
- Wendel, William B. A note on the determination of lactic and pyruvic acids, 102, 47
- Oxidations by erythrocytes and the catalytic influence of methylene blue. I. The oxidation of lactate to pyruvate, 102, 373
- II. Methemoglobin and the effect of cyanide, 102, 385
- Catalytic reduction of methemoglobin to hemoglobin by methylene blue, 123, cxxiv
- Went, F. W. See KOEPFLI, THIMANN, and WENT, 122, 763
- Werkman, C. H. See WOOD and WERKMAN, 105, 63
- See OSBURN, BROWN, and WERKMAN, 121, 685
- Wertheimer, D. See ECKER, PILLEMER, MARTIENSEN, and WERTHEIMER, 123, 351, 359
- Werthessen, Nicholas T. An apparatus for the measurement of the metabolic rate of small animals, 119, 233
- Wesson, Laurence G., and Murrell, Florence C. A dietary factor concerned with carbohydrate metabolism, 102, 303
- and —. Metabolism of various carbohydrates by rats maintained on a fat-deficient diet, 105, xcix
- Loss of the carbohydrate metabolism factor during the boiling of vegetables, 123, cxxv
- West, Edward S. See FREIBERG and WEST, 101, 449
- , Hoagland, Charles L., and Curtis, George H. An im-

West, Edward S.—*continued*

- proved method for the determination of acetyl values of lipids applicable to hydroxylated fatty acids, 104, 627
- , Lane, Ruth A., and Curtis, George H. Precipitating agents for use in the estimation of sugars in biological materials, 109, xcvi
- See MOORE, ERLANGER, and WEST, 113, 43
- See NEY and WEST, 114, 547
- See HAFNER, SWINNEY, and WEST, 116, 691
- and Ney, Luman F. A reaction of ascorbic acid with formaldehyde, 119, cii
- and Judy, Frederick R. The destructive action of acidified candies upon tooth enamel, 123, cxxv
- West, Harold D., and Carter, Herbert E. Synthesis of α -amino- β -hydroxy-*n*-butyric acids. III. A simple method of preparing a mixture of the two forms, 119, 103
- and —. IV. Separation of mixtures of the two forms and preparation of *d*(-)- and *l*(+)-threonine, 119, 109
- , Krummel, Guy S., and Carter, Herbert E. Synthesis of α -amino- β -hydroxy-*n*-butyric acids. V. Preparation of *dl*-allothreonine, with notes concerning the addition of methyl hypobromite to unsaturated acids, 122, 605
- and Carter, Herbert E. Synthesis of α -amino- β -hydroxy-

- n*-butyric acids. VI. Preparation of *d*- and *l*-allothreonine and nutritive value of the four isomers, 122, 611
- West, Randolph. See DAKIN and WEST, 109, 489
- See DAKIN, UNGLEY, and WEST, 115, 771
- Westerfeld, W. W., MacCorquodale, D. W., Thayer, Sidney A., and Doisy, Edward A. The ketonic estrogen of sow ovaries, 123, cxxvi
- Westfall, B. B., Findley, Thomas, and Richards, A. N. Quantitative studies of the composition of glomerular urine. XII. The concentration of chloride in glomerular urine of frogs and *Necturi*, 107, 661
- and Landis, E. M. The molecular weight of inulin, 116, 727
- See HENDRIX, WESTFALL, and RICHARDS, 116, 735
- See RICHARDS, WESTFALL, and BOTT, 116, 749
- Wharton, P. S. See HENDRIX and WHARTON, 105, 633
- See FAY and WHARTON, 109, 695
- Wheatley, A. H. M. See QUASTEL and WHEATLEY, 119, lxxx
- Wheeler, Grace. See PINCUS, WHEELER, YOUNG, and ZAHL, 116, 253
- Whipple, Dorothy V., and Church, Charles F. Relation of vitamin B (B_1) to fat metabolism. I. The rôle of fat in the refection phenomenon, 109, xcvi

- and —. The composition of growth induced by vitamin B (B₁), 114, cvii
- and —. The effect of vitamin B₁ on the respiratory quotient, 119, ciii
- Whipple, G. H.** See **DAFT**, **ROBSCHT-ROBBINS**, and **WHIPPLE**, 103, 495
108, 487
113, 391
121, 45
123, 87
- Whistler, Roy L., and Buchanan, B. F.** Preparation of β -glucose, 125, 557
- Whitcher, L. B., Booher, Lela E., and Sherman, H. C.** Further studies on the calcium content of the body in relation to the calcium and phosphorus content of the food, 115, 679
- White, Abraham.** The cystine yielded by deaminized casein, 103, 295
- See **VICKERY** and **WHITE**, 103, 413
- See **COHN** and **WHITE**, 109, 169
- and **Jackson, Richard W.** The effect of bromobenzene on the utilization of cystine and methionine by the growing rat, 111, 507
- The production of a deficiency involving cystine and methionine by the administration of cholic acid, 112, 503
- See **FISHMAN** and **WHITE**, 113, 175
- and **Fishman, Jacob B.** The formation of taurine by the decarboxylation of cysteic acid, 116, 457
- See **STERN** and **WHITE**, 117, 95
- and **Stern, Kurt G.** Studies on the constitution of insulin. II. Further experiments on reduced insulin preparations, 119, 215
- See **BEACH** and **WHITE**, 119, viii
- See **STERN** and **WHITE**, 119, xcv
- Some products of the partial hydrolysis of crystalline edestin by pepsin, 119, ciii
- and **Beach, Eliot F.** The rôle of cystine, methionine, and homocystine in the nutrition of the rat, 122, 219
- See **STERN** and **WHITE**, 122, 371
- See **SIMON** and **WHITE**, 123, cix
- White, Florence R.** See **LEWIS**, **BROWN**, and **WHITE**, 114, 171
- , **Lewis, Howard B., and White, Julius.** The metabolism of sulfur. XXIV. The metabolism of taurine, cysteic acid, cystine, and of some peptides containing these amino acids, 117, 663
- White, H. L. and Monaghan, Betty R.** The isoelectric point of adsorbed hemoglobin, 113, 371
- White, Julius.** The preparation of glycyltaurine and glycylcysteic acid, 102, 249

White, Julius—*continued*

- The synthesis of cystinyl-diglycine and cystinyl-dialanine, 106, 141
- See WHITE, LEWIS, and WHITE, 117, 663
- See VELICK and WHITE, 123, cxxiii
- White, Ralph V. See McCLENDON, BRATTON, and WHITE, 119, lxxvii
- See McCLENDON and BRATTON, 123, 699
- See McCLENDON and RICE, 123, lxxxii
- Whitehorn, John C. A chemical method for estimating epinephrine in blood, 108, 633
- Whitman, B., Wintersteiner, Oskar, and Schwenk, E. β -Estradiol, 118, 789
- Whittier, E. O. Buffer intensities of milk and milk constituents. II. Buffer action of calcium phosphate, 102, 733
- III. Buffer action of calcium citrate, 123, 283
- Wideman, A. H. See DRABKIN, WIDEMAN, and LANDOW, 109, xxvii
- Wies, Carl H. See THOMPSON, TENNANT, and WIES, 108, 85
- Wilcox, D. E. See RUSSELL, TAYLOR, and WILCOX, 105, lxxiv
- 107, 735
- Wilder, A. B. See KHARASCH, LEGAULT, WILDER, and GERARD, 113, 537, 557
- Wilder, O. H. M. See BETHKE, RECORD, and WILDER, 112, 231
- Wilder, Russell M. See POWER, WILDER, and CUTLER, 123, xciv
- Wilder, Violet M. The cholesterol content of dystrophic rabbits, 119, civ
- See SPENCER, MORGULIS, and WILDER, 120, 257
- See MORGULIS, WILDER, SPENCER, and EPPSTEIN, 124, 755
- Wiley, Frank H., Wiley, Leona L., and Waller, Dorothy S. The effect of the ingestion of sodium, potassium, and ammonium chlorides and sodium bicarbonate on the metabolism of inorganic salts and water, 101, 73
- and —. The inorganic salt balance during dehydration and recovery, 101, 83
- , Bergen, Dorothy S., and Blood, Frank R. The formation of oxalic acid, 119, cv
- The metabolism of β -naphthylamine, 123, cxxvii
- 124, 627
- Wiley, Leona L. See WILEY, WILEY, and WALLER, 101, 73
- See WILEY and WILEY, 101, 83
- Wilkerson, Vernon A. The chemistry of embryonic growth. IV. The requirement of the pig embryo for copper, 104, 541
- The chemistry of human epidermis. I. Amino acid

- content of the stratum corneum and its comparison to other human keratins, 107, 377
- II. The isoelectric point of the stratum corneum and other human keratins as determined by electrophoresis, 109, xcix
- II. The isoelectric points of the stratum corneum, hair, and nails as determined by electrophoresis, 112, 329
- IV. The effect of certain salts upon the ζ -potential of the stratum corneum, 123, cxxviii
- Wilkins, Elwood S., Jr. See WILLOUGHBY and WILKINS, 124, 639
- Wilkins, Walter E. See CULLEN and WILKINS, 102, 403
- See CULLEN, WILKINS, and HARRISON, 102, 415
- A method for quick dry ashing of blood serum for the determination of sodium by the uranyl zinc acetate method, 105, 177
- and Jones, Herman D. A method for the quick dry ashing of blood plasma and whole blood for the determination of chlorides, 117, 481
- Williams, Edward F., Jr., and Morrison, Dempsie B. Displacement of globin from hemoglobin by pyridine, 119, cv
- See MORRISON and WILLIAMS, 123, lxxxvii
- and Morrison, Dempsie B. Mechanism of the globin-ferrihemate conjugation, 123, cxxix
- Williams, Harold H. See HANSEN, WILSON, and WILLIAMS, 114, 209
- See ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY, 114, xxxii
- See ERICKSON, WILLIAMS, BERNSTEIN, and JONES, 114, xxxii
- See ERICKSON, WILLIAMS, HUMMEL, and MACY, 118, 15
- See ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY, 118, 569
- , Erickson, Betty Nims, Bernstein, Samuel S., Hummel, Frances Cope, and Macy, Icie G. The lipid and mineral distribution of the serum and erythrocytes in pernicious anemia. Before and after therapy, 118, 599
- See BERNSTEIN, JONES, ERICKSON, WILLIAMS, AVRIN, and MACY, 122, 507
- See ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY, 122, 515
- , Erickson, Betty Nims, Avrin, Ira, Bernstein, Samuel S., and Macy, Icie G. Determination of cephalin in phospholipids by the estimation of choline, 123, 111
- See BEACH, ERICKSON, BERNSTEIN, and WILLIAMS, 123, vi

Williams, Harold H.—*continued*

— See ERICKSON, LEE, and WILLIAMS, 123, xxxiv

Williams, Priscilla. See SUNDERMAN and WILLIAMS, 102, 279

— See SUNDERMAN, 113, 111

Williams, Ray D., and Olmsted, W. H. A biochemical method for determining indigestible residue (crude fiber) in feces: lignin, cellulose, and non-water-soluble hemicelluloses, 108, 653

— See SHAFFER and WILLIAMS, 111, 707

Williams, Roger J., and Saunders, Donald H. The effect of inositol, crystalline vitamin B, and pantothenic acid on the growth of different strains of yeast, 105, xcix

— Fractional electrical transport as a tool in biochemical research, 110, 589

Willier, B. H., Gallagher, T. F., and Koch, F. C. The action of male and female hormones upon the reproductive glands and ducts of the chick embryo, 109, xcix

Willoughby, Carl E., and Wilkins, Elwood, S., Jr. The lead content of human blood, 124, 639

Wilson, D. A. See STRICKLER and WILSON, 123, cxviii

—, Strickler, H. S., and McElroy, William S. Urinary estrogens, 123, cxxix

Wilson, D. Wright. See MOORE and WILSON, 105, lxiii

— See DE BEER, JOHNSTON, and WILSON, 108, 113

— See BOTT and WILSON, 109, 455, 463

— See WOLFF and WILSON, 109, 565

— See MOORE and WILSON, 114, lxxi
119, 573, 585

— See GURIN, BACHMAN, and WILSON, 123, xlix

— and Wolff, William A. Basic nitrogenous extractives of *Necturus* muscle, 124, 103

Wilson, Hildegard. See SHORE, WILSON, and STUECK, 112, 407

— and Cannan, R. Keith. The glutamic acid-pyrrolidonecarboxylic acid system, 119, 309

Wilson, William R., and Hanner, James P. Changes of total lipid and iodine number of blood fat in alimentary lipemia, 106, 323

— and Hansen, Arild E. Study of the serum lipids by a microgravimetric technique, 112, 457

— See HANSEN, WILSON, and WILLIAMS, 114, 209

Wimmer, E. J. See HUGHES and WIMMER, 108, 141

Wing, Mary. See WANG, KAUCHER, and WING, 109, xcv

Winkler, Alexander W., and Smith, Paul K. The fate of intravenously injected potassium salts, 123, cxxx

- and —. The apparent volume of distribution of potassium injected intravenously, 124, 589
- Winnek, Philip S., and Smith, Arthur H. The determination of bromine in biological substances, 119, 93
- and —. Influence of bromide and chloride in the diet on the amount of bromine in the body, 119, cvi
- and —. Studies on the rôle of bromine in nutrition, 121, 345
- Winter, Irwin C. Fat metabolism in the dog following liver injury produced by carbon tetrachloride, 124, 339
- Wintersteiner, Oskar. The action of sulfhydryl compounds on insulin, 102, 473
- , Vars, Harry M., and Piffner, J. J. Chemical investigations on the cortical hormone of the adrenal gland, 105, c
- and Allen, Willard M. Crystalline progestin, 107, 321
- and Piffner, J. J. Chemical investigations on the cortical hormone of the adrenal gland, 109, c
- See PFIFFNER, WINTERSTEINER, and VARS, 111, 585
- and Piffner, J. J. Chemical studies on the adrenal cortex. II. Isolation of several physiologically inactive crystalline compounds from active extracts, 111, 599
- See PFIFFNER and WINTERSTEINER, 114, lxxx
- and Piffner, J. J. Chemical studies on the adrenal cortex. III. Isolation of two new physiologically inactive compounds, 116, 291
- See WHITMAN, WINTERSTEINER, and SCHWENK, 118, 789
- and Hirschmann, H. Estrogenic diols in the urine of pregnant mares, 119, cvii
- See HIRSCHMANN and WINTERSTEINER, 122, 303
- Wirick, Alice M. See BILLS, MASSENGALE, McDONALD, and WIRICK, 108, 323
- Wiseman, H. G., Kane, Edward A., and Cary, C. A. The losses involved in determining carotene in hays and in fresh green plants, 105, ci
- and Cary, C. A. The spectrophotometric determination of carotene in butter fat, 109, ci
- and Kane, Edward A. The determination of carotene in fresh plant materials, 114, cviii
- See SHINN, KANE, WISEMAN, and CARY, 119, lxxxix
- Witt, Ewald. See CURTIS, MILLER, and WITT, 119, xxi
- Witzemann, Edgar J. The oxidation of metabolites. III. The mechanism of the oxidation of fatty acids in an alkaline phosphate-hydrogen peroxide system, 107, 475

- Woelfel, Warren C. The colorimetric determination of sodium as uranyl manganese sodium acetate, 125, 219
- Wolf, Paul A. See CORLEY, KRAMER, and WOLF, 109, xxiii
- See CORLEY, WOLF, and NIELSEN, 123, xxvi
- Wolff, William A., and Wilson, D. Wright. Carnosine and anserine in mammalian skeletal muscle, 109, 565
- See WILSON and WOLFF, 124, 103
- Womack, Madelyn, and Rose, William C. Feeding experiments with mixtures of highly purified amino acids. VI. The relation of phenylalanine and tyrosine to growth, 107, 449
- See ROSE, MCCOY, MEYER, CARTER, WOMACK, and MERTZ, 109, lxxvii
- and Rose, William C. Feeding experiments with mixtures of highly purified amino acids. VII. The dual nature of the "unknown growth essential," 112, 275
- See ROSE, KEMMERER, WOMACK, MERTZ, GUNTHER, MCCOY, and MEYER, 114, lxxxv
- and Rose, William C. The relation of leucine, isoleucine, and norleucine to growth, 116, 381
- , Kemmerer, Kenneth S., and Rose, William C. The relation of cystine and methionine to growth, 121, 403
- Wood, H. G., and Werkman, C. H. The propionic acid bacteria. On the mechanism of glucose dissimilation, 105, 63
- Wood, Marion L., Madden, Robert J., and Carter, Herbert E. Synthesis of α -amino- β -hydroxy-*n*-butyric acids. II, 117, 1
- Wood, Thomas R. See GUSTAVSON, WOOD, and HAYS, 114, xlv
- See GUSTAVSON, HAYS, and WOOD, 119, xlii
- Wood, William B., Jr. Physicochemical studies of the reducing action of glucose, 105, cii
- A preliminary physicochemical study of the reducing action of glucose, 110, 219
- Woods, E. B. See OBERST and WOODS, 111, 1
- Woods, Oliver R. See GUSTUS, MEYER, and WOODS, 114, 59
- Woodward, Gladys E. See SCHROEDER, WOODWARD, and PLATT, 101, 133
- Glyoxalase. III. Glyoxalase as a reagent for the quantitative microestimation of glutathione, 109, 1
- , Munro, Muriel Platt, and Schroeder, E. F. Glyoxalase. IV. The antiglyoxalase action of kidney and pancreas preparations, 109, 11
- See MUSULIN, WOODWARD, SILVERBLATT, and KING, 114, lxxiv

- . See SCHROEDER and WOODWARD, 120, 209
- Woolley, D. W., and Peterson, W. H. The chemistry of mold tissue. XI. Isolation of leucine and isoleucine from *Aspergillus sydowi*, 114, 85
- and — . XII. Isolation of arginine, histidine, and lysine from *Aspergillus sydowi*, 118, 363
- and — . Isolation of nitrogenous compounds from the mold *Aspergillus sydowi*, 119, cvii
- and — . The chemistry of mold tissue. XIII. Isolation of some monoaminomonocarboxy and some monoaminodicarboxy acids from *Aspergillus sydowi*, 121, 507
- and — . Some observations on the Kapeller-Adler method for the determination of histidine. The histidine content of yeast, 122, 207
- and — . The chemistry of mold tissue. XIV. Isolation of cyclic choline sulfate from *Aspergillus sydowi*, 122, 213
- . See ELVEHJEM, MADDEN, STRONG, and WOOLLEY, 123, 137
- , Strong, F. M., and Madden, Robert J. Activity of pyridine derivatives in the cure of canine black tongue, 123, cxxxi
- , — , — , and Elvehjem, C. A. Anti-black tongue activity of various pyridine derivatives, 124, 715
- , Waisman, Harry A., Mickelsen, Olaf, and Elvehjem, C. A. Some observations on the chick antidermatitis factor, 125, 715
- Wright, Norman. The infra-red absorption spectra of the stereoisomers of cystine, 120, 641
- Wu, Hsien, and Wang, Cheng-fah. Surface denaturation of egg albumin, 123, 439
- Wyckoff, Ralph W. G. See COREY and WYCKOFF, 114, 407
- and Corey, Robert B. x-Ray diffraction patterns of crystalline tobacco mosaic proteins, 116, 51
- , Biscoe, J., and Stanley, W. M. An ultracentrifugal analysis of the crystalline virus proteins isolated from plants diseased with different strains of tobacco mosaic virus, 117, 57
- . Molecular sedimentation constants of tobacco mosaic virus proteins extracted from plants at intervals after inoculation, 121, 219
- . See LORING and WYCKOFF, 121, 225
- . An ultracentrifugal study of the pH stability of tobacco mosaic virus protein, 122, 239
- . See BEARD and WYCKOFF, 123, 461
- . See STERN and WYCKOFF, 124, 573

- Wyckoff, Ralph W. G.**—*continued*
 —. An ultracentrifugal analysis of the aucuba mosaic virus protein, 124, 585
Wylie, H. Boyd. See SCHMULOVITZ and WYLIE, 116, 415
 —. See SCHMIDT, SCHMULOVITZ, SZCZYPINSKI, and WYLIE, 120, 705
Wyman, Jeffries, Jr. See ED-SALL and WYMAN, 105, xxiv
 —. See GERMAN and WYMAN, 117, 533
 —. See GREENSTEIN and WYMAN, 123, xlv
 —. See GREENSTEIN, KLEMPERER, and WYMAN, 125, 515
Wynne, A. M. See WEINSTEIN and WYNNE, 112, 641, 649

Y

- Yang, P. S.** See LEVENE and YANG, 102, 541, 557
 111, 751
Yannet, Herman, Darrow, Daniel C., and Cary, M. Katherine. The effect of changes in the concentration of plasma electrolytes on the concentration of electrolytes in the red blood cells of dogs, monkeys, and rabbits, 112, 477
 —. See HARRISON, DARROW, and YANNET, 113, 515
 — and Darrow, Daniel C. The effect of growth on the distribution of water and elec-

- trolites in brain, liver, and muscle, 123, 295
Yavorsky, Martin, Almaden, Phillip, and King, C. G. The vitamin C content of human tissues, 106, 525
Yeakel, Eleanor H., and Blanchard, Ernest W. The effect of adrenalectomy upon blood phospholipids and total fatty acids in the cat, 123, 31
Yoder, Lester. The chemical activation of sterols. I. The nature of the floridin activation of cholesterol, 116, 71
 —. See ECK, THOMAS, and YODER, 117, 655
Yokela, Edith. See OKEY, GILLUM, and YOKELA, 107, 207
Young, E. Gordon. On the separation and characterization of the proteins of egg white, 120, 1
 — and Inman, W. Robert. The protein of the casing of salmon eggs, 123, cxxxi
 124, 189
Young, Genevieve. See PINCUS, WHEELER, YOUNG, and ZAHL, 116, 253
Young, Leslie. The effect of pyocyanine on the metabolism of cerebral cortex, 120, 659
 —. See PREISLER, HILL, RONZONI, and YOUNG, 123, xcvi
Yuen, D. W. See ADDIS, POO, LEW, and YUEN, 113, 497
Yuska, Henry. See SOBEL, YUSKA, and COHEN, 118, 443

Z

- Zahl, P. A.** See **PINCUS**,
WHEELER, **YOUNG**, and **ZAHL**,
 116, 253
- Zahnd, H.**, and **Clarke, H. T.**
 Labile sulfur in proteins,
 102, 171
- Zapp, John A., Jr.** Quantitative
 studies of carnosine and an-
 serine in mammalian muscle,
 123, cxxxii
- Zerfas, L. G.** See **HELMER**,
FOUTS, and **ZERFAS**,
 105, xxxvii
- Zervas, Leonidas.** See **BERG-**
MANN, **ZERVAS**, **FRUTON**,
SCHNEIDER, and **SCHLEICH**,
 109, 325
- See **BERGMANN**, **ZERVAS**,
 and **FRUTON**, 111, 225
- See **BERGMANN**, **ZERVAS**,
 and **ROSS**, 111, 245
- See **BERGMANN** and **ZERVAS**,
 113, 341
 114, 711
- See **BERGMANN**, **ZERVAS**,
 and **FRUTON**, 115, 593
- Zittle, Charles A.**, and **Schmidt,**
Carl L. A. Heats of solution,
 heats of dilution, and specific
 heats of aqueous solutions of
 certain amino acids,
 108, 161
- Zozaya, José.** A physicochem-
 ical study of blood sera,
 110, 599
- Zscheile, F. P., Jr.** See **MILLER**,
ZSCHEILE, **KOCH**, **HOGNESS**,
 and **KOCH**, 109, lxxv
- See **HOGNESS**, **ZSCHEILE**,
SIDWELL, and **BARRON**,
 118, 1
- See **HOGNESS**, **SIDWELL**,
 and **ZSCHEILE**, 120, 239
- Zussman, Hyman.** See **WALD**
 and **ZUSSMAN**, 122, 449

SUBJECT INDEX

Entries for physical constants or properties or for such physiological phenomena as *Absorption*, *Assimilation*, *Digestion*, *Equilibrium*, *Excretion*, *Fermentation*, *Metabolism*, *Respiration*, etc., have been made only when the subject is treated in a general sense; not when these subjects occur in connection with a definite substance.

When a definite constituent occurs in connection with *Biological fluids*, *Biological material*, *Biological systems*, *Blood*, *Blood cell*, *Blood plasma*, *Blood serum*, *Diet*, *Milk*, *Tissue*, *Urine*, the constituent only is indexed. However, *Blood sugar* is indexed as such.

A

- Abel, John Jacob:** Obituary (CLARK) 1938, 124, preceding p. 573
- Abrine:** Synthesis and configurational relationships (CAHILL and JACKSON) 1938, 123, xviii
- Abscess:** Nitrogen metabolism, anemic and non-anemic dogs, protein relation (DAFT, ROBSCHT-ROBBINS, and WHIPPLE) 1937, 121, 45
- Absorption:** (*See note above*)
- Acacia:** Blood serum, lymph, and urine, determination, volumetric (POWER) 1937, 119, lxxviii
- Acetals:** Sugars (CAMPBELL and LINK) 1937-38, 122, 635
- Acetamide:** Iodo-, sulfhydryl groups, urease, and fermentation, action (SMYTHE) 1936, 114, xcv

Acetamide—continued:

- Iodo-, sulfhydryl groups, urease, and yeast preparations, reactions (SMYTHE) 1936, 114, 601
- Acetate:** Iodo-, sulfhydryl groups, urease, and fermentation, action (SMYTHE) 1936, 114, xcv
- , —, —, and yeast preparations, reactions (SMYTHE) 1936, 114, 601
- Acetic acid(s):** Disubstituted, nitrophenyl esters, and corresponding free acids, rotations (LEVENE, ROTHEN, and MEYER) 1934, 107, 555
- , with ethyl group, configurational relationship (LEVENE, ROTHEN, and MEYER) 1936, 115, 401
- , — methyl group, 2-hydroxy acids, configurational correlation (LEVENE and HARRIS) 1935-36, 112, 195

Acetic acid(s)—continued:

Guanido-, creatine precursor
(BODANSKY)

1936, 115, 641

—, excretion (BODANSKY,
DUFF, and HERRMANN)

1937, 119, xiii

—, metabolism (WEBER)

1936, 114, cvii

Iodo-, amines, tertiary, action
(SCHUBERT)

1936, 116, 437

—, amino acids, sulfur-con-
taining, nutrition deficiency
(SIMON and WHITE)

1938, 123, cix

—, yeast fermentation inhibi-
tion, sulfhydryl relation
(SCHROEDER, WOODWARD,
and PLATT)

1933, 101, 133

Methylbenzyl- and methyl-
phenethyl-, derivatives, con-
figurational relationship
(LEVENE) 1935, 110, 323

—, methylbenzylpropionic
acid, configurational rela-
tionship (LEVENE and
MARKER) 1935, 110, 299

Methylheptyl- and methyl-
octyl-, derivatives, con-
figurational relationship
(LEVENE) 1935, 110, 323

Methylphenyl- and ethyl-
phenyl-, hydrocarbons de-
rived from (LEVENE and
MARKER) 1935, 108, 409

— — methylhexyl-, configura-
tional relationship (LEVENE
and HARRIS)

1935-36, 112, 195

Phenyl-, detoxication (AM-

BROSE, POWER, and SHER-
WIN) 1933, 101, 669

Acetic anhydride: Hydration,
non-aqueoustitration method
(LAVINE and TOENNIES)

1933, 101, 727

Acetoacetic acid: Aldehydes and
sugars, reaction (FRIEDE-
MANN and KLAAS)

1935, 109, xxxiv

β -Hydroxybutyric acid, reduc-
tion in liver, malonic acid
effect (STARK and COHEN)

1938, 123, cxv

Acetoacetic ester: Glucose and,
compounds (MOORE, ER-
LANGER, and WEST)

1936, 113, 43

Acetobromo-*d*-galacturonic acid:
 α -, methyl ester, β -methyl-
d-galacturonide conversion
to (MORELL, BAUR, and
LINK) 1935, 110, 719

—, —, synthesis (MORELL,
BAUR, and LINK)

1935, 110, 719

Acetobromo-*d*-ribose: 2,4-Dieth-
oxypyrimidine and, inter-
action (HILBERT and RIST)

1937, 117, 371

Acetone: Blood, determination
(ABELS) 1937, 119, 663

-Butyl alcohol fermentation,
intermediary compounds
(JOHNSON, PETERSON, and
FRED) 1933, 101, 145

Derivatives, *d*-ribose (LEVENE
and STILLER)

1933, 102, 187

1934, 106, 421

Determination, colorimetric,
salicylaldehyde method
(RAVIN) 1936, 115, 511

Acetone—continued:

Urine, determination (ABELS)
1937, 119, 663

Acetone bodies: Production,
phlorhizinized animal,
hydrazine effect (GREEN-
BERG) 1935-36, 112, 431

**Acetone-methylrhamnopyrano-
side:** Chemical constitution
and properties (LEVENE and
MUSKAT) 1934, 105, 431

Acetonitrile: Cystine perchlo-
rate oxidation products in
(TOENNIES and LAVINE)
1934, 105, 107

Hydration, non-aqueous titra-
tion method (LAVINE and
TOENNIES)

1933, 101, 727

Acetylaminobenzoic acid: *p*-,
formation, rabbit (HARROW,
MAZUR, BOREK, and SHER-
WIN) 1934, 105, xxxiv

Acetylation: (HARROW, MAZUR,
and SHERWIN)

1933, 102, 35

(HARROW, MAZUR, BOREK,
and SHERWIN)

1934, 105, xxxiv

Acetyl proteins: Alkali effect
(HENDRIX and PAQUIN)

1938, 124, 135

Acetyl value: Lipids, determina-
tion (WEST, HOAGLAND, and
CURTIS) 1934, 104, 627

Acid(s): Bile. *See* Bile acids
Blood, first change (LAUG)

1934, 106, 161

Carotenoids, effect (QUACKEN-
BUSH, STEENBOCK, and
PETERSON)

1938, 123, xcvi

Acid(s)—continued:

Fatty. *See* Fatty acids

Gaseous, amino acids and pro-
teins, combinations (CZAR-
NETZKY and SCHMIDT)
1934, 105, 301

Inorganic. *See* Inorganic
acids

-Neutralizing power, saliva
(SOYENKOFF and HINCK)
1935, 109, 467

Organic. *See* Organic acids

Plant tissue, determination
(PUCHER, VICKERY, and
WAKEMAN)

1934, 105, lxviii

Sugar, preparation, *d*-glucose
(HART, SHEPPARD, and
EVERETT) 1938, 123, lii

Unsaturated, methyl hypo-
bromite effect (WEST,
KRUMMEL, and CARTER)
1937-38, 122, 605

Volatile, identification and de-
termination (FRIEDEMANN)
1938, 123, 161

Acid-base: Blood (ROBINSON,
PRICE, and CULLEN)

1934, 106, 7

1935, 109, lxxiv

1936, 114, 321

(ROBINSON, PRICE, HODGEN,
NELSON, and CULLEN)

1936, 114, lxxxiv

—, work, effect (HASTINGS,
DILL, and EDWARDS)

1936, 114, xlvii

-Combining capacity, tubercu-
lin protein (SEIBERT)

1936, 114, lxxxix

Acid-base equilibrium: Basal
conditions (CAPE and SEV-
RINGHAUS) 1933, 103, 257

Acid-base equilibrium—continued:

Blood (SHOCK and HASTINGS)

1934, 104, 585

—, displacement (SHOCK and HASTINGS)

1935-36, 112, 239

—, microdetermination (SHOCK and HASTINGS)

1934, 104, 565

—, nomogram (HASTINGS and SHOCK)

1934, 104, 575

— serum, diet low in inorganic constituents, effect (SMITH and SMITH)

1934, 105, lxxxii

— —, fatigue effect (MORSE and SCHLUTZ)

1935, 109, lxix

— —, hyperthermia (DANIELSON and STECHER)

1936, 114, xxiii

Food, determination (DAVIDSON and LEClerc)

1935, 108, 337

Minerals, pregnancy (COONS, COONS, and SCHIEFELBUSCH)

1934, 104, 757

Urine (SENDROY, SEELIG, and VAN SLYKE)

1934, 106, 479

—, ammonia secretion, nephritis, relation (BRIGGS)

1935, 109, xii

Acidity: Gastric juice, composition and, relation (HOLLANDER)

1934, 104, 33

— —, mucus secretion, relation (HELMER, FOUTS, and ZERFAS)

1934, 105, xxxvii

Urine (MORGULIS)

1933, 103, 757

Acidosis: (SENDROY, SEELIG, and VAN SLYKE)

1934, 106, 463, 479

Acidosis—continued:

Ammonia excretion (ALVING and GORDON)

1937, 120, 103

Creatinine excretion (ALVING and GORDON)

1937, 120, 103

Fatigue, relation (MORSE, SCHLUTZ, and HASTINGS)

1934, 105, lxiv

-Producing hormone, urine, normal (FUNK)

1934, 105, xxix

Respiratory, blood and muscle salt and water exchange, effect (EICHELBERGER and HASTINGS)

1937, 118, 197

Urea excretion (ALVING and GORDON)

1937, 120, 103

Acridine salts: Yeast and muscle adenylic acid (TIPSON)

1937, 120, 621

Acrodynia: Fatty acids, essential, relation (QUACKENBUSH and STEENBOCK)

1938, 123, xevii

Production and cure (GUERRANT, CHORNOCK, and DUTCHER)

1937, 119, xlii

Acrylic acid: β -3-Indole-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG)

1934, 104, 675

Adenine: Nucleotide, blood (BUELL)

1935, 108, 273

—, —, hemoglobin relation (BUELL)

1935-36, 112, 523

—, hemoglobin, hematocrit, and red blood cell count, relation (BUELL)

1935, 109, xii

Adenosine: Diacetyl, phosphorylation (LEVENE and TIPSON) 1937, 121, 131
 Fate, dog (CERECEDO and ALLEN) 1934, 107, 421
 Monoacetone, phosphorylation (LEVENE and TIPSON) 1937, 121, 131
Adenylic acid: Yeast and muscle, acridine salts (TIPSON) 1937, 120, 621
 —, ribosephosphoric acid from (LEVENE and HARRIS) 1933, 101, 419
Adolescence: Calcium retention (STEARNS) 1934, 105, lxxxiv
Adolescents: Creatinuria, males (LIGHT and WARREN) 1934, 104, 121
Adrenal(s): Autolysis (BRADLEY and BELFER) 1938, 123, xv
 Cortex (KENDALL, MASON, HOEHN, and MCKENZIE) 1937, 119, lvi
 —, chemistry (MASON, MYERS, and KENDALL) 1936, 116, 267
 —, — and physiology (KENDALL, MASON, MYERS, and ALLERS) 1936, 114, lvii
 —, Compound E conversion to adrenosterone (MASON) 1938, 124, 475
 —, — — — to $C_{21}O_4$ series (MASON) 1938, 124, 475
 —, compounds, structure (MASON, HOEHN, MCKENZIE, and KENDALL) 1937, 120, 719
 (MASON, HOEHN, and KENDALL) 1938, 124, 459

Adrenal(s)—*continued:*

Cortex extract, blood pressure-raising principle (LOONEY and DARNELL) 1936, 114, lxii
 — extracts, inactive crystalline compounds in (WINTERSTEINER and PFIFFNER) 1935, 111, 599
 —, hormone, adrenalectomy, requirement (PFIFFNER, SWINGLE, and VARS) 1934, 104, 701
 —, —, assay (PFIFFNER, SWINGLE, and VARS) 1934, 104, 701
 — —, chemical nature and physiological action (KENDALL, MASON, MCKENZIE, MYERS, and KOELSCH) 1934, 105, xlv
 — —, chemistry (WINTERSTEINER, VARS, and PFIFFNER) 1934, 105, c
 (WINTERSTEINER and PFIFFNER) 1935, 109, c
 (PFIFFNER and WINTERSTEINER) 1936, 114, lxxx
 — —, distribution (PFIFFNER and VARS) 1934, 106, 645
 — — extract, organ vitamin C, ascorbic acid administration with, effect (SVIRBELY) 1935, 111, 147
 — — extracts, preparation (CARTLAND and KUIZENGA) 1936, 116, 57
 — —, preparation (PFIFFNER, VARS, and TAYLOR) 1934, 106, 625
 — —, — for oral administration (GROLLMAN, FIROR, and GROLLMAN) 1935, 109, 189

Adrenal(s)—continued:

- Cortex hormone, various species (VARS, TAYLOR, and PFIFFNER) 1934, 106, 639
 — hormones, fractionation (PFIFFNER, WINTERSTEINER, and VARS) 1935, 111, 585
 —, inactive compounds, isolation (WINTERSTEINER and PFIFFNER) 1936, 116, 291
 Crystalline compounds, chemistry (MASON, MYERS, and KENDALL) 1936, 114, 613
 Demedullated, blood sugar, physostigmine and, effect (HARNED and COLE) 1938, 123, li
 Epinephrine, hypertension, essential, relation (KOEHLER) 1936, 114, lix
 -Inactivated cats, brain glycogen, free sugar, and lactic acid, insulin effect (KERR, HAMPEL, and GHANTUS) 1937, 119, 405
 Insufficiency, tissue effect (DARROW and HARRISON) 1938, 123, xxvii
 Lipolytic enzymes, distribution (GLICK and BISKIND) 1935, 110, 575
 Medulla, purine metabolism, insulin and, relation (LARSON and BREWER) 1936, 115, 279
 — removal, blood lactic acid, insulin and, effect (SCOTT and BERG) 1936, 115, 163

Adrenal(s)—continued:

- Phosphatides, fatty acids, beef (AULT and BROWN) 1934, 107, 607
 Tissue, autolysis (BRADLEY and BELFER) 1938, 124, 331
 Tumor, urine compound, new (MARRIAN and BUTLER) 1937, 119, lxvi
 —, — 3(α)-hydroxyetiocholane-17-one, 3(β)-hydroxyetioallocholane-17-one, and a triol, isolation (BUTLER and MARRIAN) 1938, 124, 237
 Vitamin C distribution (GLICK and BISKIND) 1935, 110, 1
 — — —, development relation (GLICK and BISKIND) 1936, 115, 551
 — —, temperature and post-mortem effect (PETERS and MARTIN) 1938, 124, 249
See also Suprarenal
Adrenalectomy: Blood amino acid, insulin and epinephrine effect (DAVIS and VAN WINKLE) 1934, 104, 207
 — and muscle water and electrolyte distribution, effect (HEGNAUER and ROBINSON) 1936, 116, 769
 — fatty acids, total, effect (YEAKEL and BLANCHARD) 1938, 123, 31
 — phospholipids, effect (YEAKEL and BLANCHARD) 1938, 123, 31
 Carbohydrate metabolism effect (BUELL, ANDERSON,

Adrenalectomy—continued:

and STRAUSS)

1936, 114, xvi

Cortical hormone requirement
(PFIFFNER, SWINGLE, and
VARS) 1934, 104, 701Glucose absorption, sexual
variation (DEUEL, HALL-
MAN, MURRAY, and SAM-
UELS) 1937, 119, 607Glycogen formation, sexual
variation (DEUEL, HALL-
MAN, MURRAY, and SAM-
UELS) 1937, 119, 607-Pancreatectomy, effect (LONG
and LUKENS)

1935, 109, lvi

Adrenalin: Exercise, effect (DILL
and EDWARDS)

1934, 105, xx

See also Epinephrine**Adreno-genital syndrome:** 3 (α)-

Hydroxyetiocholane-17-one,

3 (β)-hydroxyetioallocholane-
17-one, and triol, urine, isola-
tion (BUTLER and MARRIAN)

1938, 124, 237

Pregnane-3, 17, 20-triol, urine,
isolation (BUTLER and MAR-
RIAN) 1937, 119, 565**Adrenosterone:** Suprarenal cor-
tex Compound E conversion
to (MASON)

1938, 124, 475

Aerogenes: Bacteria, sugars,
rare, fermentation (POE and
KLEMME) 1935, 109, 43Colon bacteria and, cellobiose
fermentation (POE and
KLEMME) 1935, 109, 43**Age:** Blood calcium, chicken,
effect (HELLER, PAUL, and**Age—continued:**

THOMPSON)

1934, 106, 357

Blood lipids, effect (LORENZ,
ENTENMAN, and CHAIKOFF)
1937-38, 122, 619— phosphorus partition,
chicken, effect (HELLER,
PAUL, and THOMPSON)

1934, 106, 357

— plasma calcium, effect
(KIRK, LEWIS, and THOMP-
SON) 1935, 111, 641— — lipids, effect (PAGE,
KIRK, LEWIS, THOMPSON,
and VAN SLYKE)

1935, 111, 613

— serum inorganic phosphorus,
horse, effect (PEARSON)

1934, 106, 1

Brain protein amino acids,
effect (BLOCK)

1937, 120, 467

Liver arginase, effect (LIGHT-
BODY) 1938, 124, 169— glycogen, sexual variation,
effect (DEUEL, BUTTS, HALL-
MAN, MURRAY, and BLUN-
DEN) 1937, 119, 617Metabolism effect (DILL, ED-
WARDS, and ROBINSON)

1938, 123, xxx

Pancreas insulin, cattle, effect
(FISHER and SCOTT)

1934, 106, 305

Trout, brook, calcium and
phosphorus, effect (McCAY,
TUNISON, CROWELL, and
PAUL) 1936, 114, 259**Aglycones:** Cardiac, chemical
constitution (JACOBS and

Aglycones—continued:

ELDERFIELD)

1935, 108, 497

Cardiac, lactone group, Grignard reagent effect (JACOBS and ELDERFIELD)

1936, 114, 597

Air: Respiration chamber, analysis (CARPENTER)

1933, 101, 595

Alanine: Anhydride, alkali hydrolysis (SRINIVASAN and SREENIVASAYA)

1934, 105, 563

 β -, radical, *l*-carnosine depressor action, relation (HUNT and DU VIGNEAUD)

1938, 123, lxi

Cystinyldi-, synthesis (WHITE)

1934, 106, 141

d-, fate (BUTTS, DUNN, and HALLMAN)

1935-36, 112, 263

Diffusion coefficients (MEHL and SCHMIDT)

1936, 114, lxxvii

3,4-Dihydroxyphenyl-, tyrosine, mixtures, components, determination, colorimetric (ARNOW)

1937, 118, 531

dl-, fate (BUTTS, DUNN, and HALLMAN)

1935-36, 112, 263

—, ionization (NIMS and SMITH)

1933, 101, 401

Growth relation (GUNTHER and ROSE)

1938, 123, 39

Metabolism (BUTTS and DUNN)

1935, 109, xiii

Oxidation, tissues (BERNHEIM and BERNHEIM)

1934, 106, 79

Alanyl-*l*-histidine: *d*-, preparation and blood pressure effect (HUNT and DU VIGNEAUD)

1938, 124, 699

l-, preparation and blood pressure effect (HUNT and DU VIGNEAUD)

1938, 124, 699

Albumin: Biological fluids, determination, precipitin method (GOETTSCH and KENDALL)

1935, 109, 221

Blood serum and plasma (CAMPBELL and HANNA)

1937, 119, 15

— —, determination, angle centrifuge (PRICE, ROBINSON, and HOGDEN)

1938, 123, xcvi

— —, errors (ROBINSON, PRICE, and HOGDEN)

1937, 119, lxxxiii

1937, 120, 481

— —, synthetic solution, specific gravity (NUGENT and TOWLE)

1934, 104, 395

Egg, acetyl derivatives, denaturation effect (HENDRIX and PAQUIN)

1936, 114, xlix

—, activity coefficient, glycine effect (RICHARDS)

1937-38, 122, 727

—, carbohydrate, antigenic behavior (FERRY and LEVY)

1934, 105, xxvii

—, crystalline, enzyme hydrolysis (CALVERY)

1933, 102, 73

— —, hydrolysis, amino nitrogen, cystine, tyrosine, and tryptophane liberation rate

Albumin—continued:

- (CALVERY, BLOCK, and SCHOCK) 1936, 113, 21
- Egg, crystalline, metabolism, cystinuria (BRAND, CAHILL, and KASSELL) 1938, 125, 415
- , —, peptic hydrolysis products, fractionation (CALVERY) 1935-36, 112, 171 (CALVERY and SCHOCK) 1936, 113, 15
- , —, solutions, α -particles, irradiation effect (ARNOW) 1935, 110, 43
- , denatured, monolayers (BULL) 1938, 125, 585
- , heat denaturation, hydrogen ion concentration effect (HENDRIX and WHARTON) 1934, 105, 633
- , heat-denatured, optical rotation (BARKER) 1933, 103, 1
- , —, refractivity (BARKER) 1934, 104, 667
- , isoelectric point, apparent, ionic strength effect (SMITH) 1935, 108, 187
- , peptic hydrolysis (CALVERY and SCHOCK) 1935, 109, xvi
- , solutions, sulfhydryl groups (GREENSTEIN) 1938, 125, 501
- , structure (BERGMANN and NIEMANN) 1937, 118, 301
- , surface denaturation (BULL and NEURATH) 1937, 118, 163 (BULL) 1938, 123, 17

Albumin—continued:

- (WU and WANG) 1938, 123, 439
- (BULL and NEURATH) 1938, 125, 113
- Milk, globulin, crystalline, from (PALMER) 1934, 104, 359
- Ov-, amide nitrogen (SHORE, WILSON, and STUECK) 1935-36, 112, 407
- , isoelectric point, factors influencing (SMITH) 1936, 113, 473
- Solutions, neutral salts, action (FERRY, COHN, and NEWMAN) 1935, 109, xxxii
- Alcamine(s):** Alkyl, proteinogenic (CHRISTMAN and LEVENE) 1938, 125, 709
- Proteinogenic, and N-dialkyl derivatives, synthesis (CHRISTMAN and LEVENE) 1938, 124, 453
- Alcaptonuria:** Rat (PAPAGEORGE and LEWIS) 1937, 119, lxxvi 1938, 123, 211
- Alcohol(s):** -Extracted animal tissues, growth and lactation, effect (SEEGERS and MATTILL) 1934, 105, lxxvii
- Liver proteins, effect (SEEGERS and MATTILL) 1935, 110, 531
- Oxidation, tissues, alloxan effect (BERNHEIM) 1938, 123, 741
- Sugar (CARR and KRANTZ) 1938, 124, 221
- Tissue nutrients, extraction effect (SEEGERS) 1935, 109, lxxx

Alcohol(s)—*continued*:

Volatile, identification and determination (FRIEDEMANN) 1938, 123, 161

See also Butyl alcohol, Cetyl alcohol, Ethyl alcohol, etc.

Aldehyde(s): Acetoacetic acid, reaction (FRIEDEMANN and KLAAS) 1935, 109, xxxiv

Configurationally related, optical rotation (LEVENE and ROTHEN) 1935, 111, 739

Cysteine determination, effect (HESS and SULLIVAN)

1937, 119, xlvii

(SULLIVAN and HESS)

1937, 120, 537

—, effect (HESS and SULLIVAN)

1937, 121, 323

Cystine determination, effect (HESS and SULLIVAN)

1937, 119, xlvii

(SULLIVAN and HESS)

1937, 120, 537

—, effect (HESS and SULLIVAN)

1937, 121, 323

Thiol acids, compounds (SCHUBERT)

1936, 114, 341

Aldehyde tetraacetylmethyl-d-galacturonate: Synthesis (CAMPBELL and LINK)

1937, 120, 471

Aldobionic acid(s): Flaxseed mucilage (NIEMANN and LINK) 1934, 104, 205

Gum arabic, glycosidic union, configuration (LEVENE and TIPSON) 1938, 125, 355

— —, hexamethyl methylglycoside methyl ester, catalytic reduction to methylglycoside of hexa-

Aldobionic acid(s)—*continued*:

methyl 6-glucosidogalactose (LEVENE, MEYER, and KUNA) 1938, 125, 703

Gum arabic, transformation to disaccharide (LEVENE and TIPSON) 1938, 125, 345

Pneumococcus Type III polysaccharide, structure (HOTCHKISS and GOEBEL)

1937, 121, 195

Synthesis (HOTCHKISS and GOEBEL) 1936, 115, 285

Aldobionides: Synthesis (GOEBEL and REEVES)

1938, 123, xlii

1938, 124, 207

Aldohexose: *l*-Ribose, preparation from, cyanohydrin reaction (AUSTIN and HUMOLLER) 1934, 105, v

Aldoses: Acetylated, uronic acids and, molecular rotations, relation (GOEBEL and REEVES) 1938, 124, 207

Alfalfa: Hay carotene, vitamin A activity, relation (HARTMAN, KANE, and SHINN)

1934, 105, xxxvi

Vitamin A destruction, enzymatic, curing process (HAUGE) 1935, 108, 331

See also Hay

Algæ: Growth, bromine-free medium, synthetic (McINTYRE and BURKE)

1937, 119, lxviii

Marine, amino acids (MAZUR and CLARKE)

1938, 123, 729

Alkaline reserve: Organic salts, ingestion effect (CAPE and

Alkaline reserve—continued:

SEVRINGHAUS)

1933, 103, 257

(CAPE) 1935, 109, xvii

Sodium citrate and sodium
bicarbonate ingestion effect
(CAPE and SEVRINGHAUS)

1937, 121, 549

Alkaline tide: Urine, gastric
secretion, relation (HUB-
BARD, MUNFORD, and
TYNER) 1933, 101, 781**Alkaloids:** Chin-shih-hu (CHEN
and CHEN) 1935, 111, 653

Ergot (JACOBS and CRAIG)

1934, 104, 547

1934, 106, 393

1935, 108, 595

1935, 110, 521

1935, 111, 455

1936, 113, 759, 767

1936, 115, 227

(JACOBS and GOULD)

1937, 120, 141

(JACOBS and CRAIG)

1937-38, 122, 419

(CRAIG, SHEDLOVSKY,
GOULD, and JACOBS)

1938, 125, 289

Han-fang-chi (CHEN and
CHEN) 1935, 109, 681

Veratrine (JACOBS and CRAIG)

1937, 119, 141

1937, 120, 447

1938, 124, 659

1938, 125, 625

Alkalosis: Overventilation, fixed
base excretion (BRIGGS)

1937, 119, xv

Respiratory, blood and muscle
salt and water exchange,
effect (EICHELBERGER and

HASTINGS) 1937, 118, 197

Alkyl alcamines: Proteinogenic
(CHRISTMAN and LEVENE)

1938, 125, 709

Alkyl halides: 2-Halogeno acids,
configurational relationship
(LEVENE and ROTHEN)

1937, 119, 189

Allantoin: Excretion, glycine
administration effect (MAR-
TIN and CORLEY)

1934, 105, lvii

—, insulin effect (LARSON and
CHAIKOFF)

1935, 108, 457

—, purine-free and protein-free
diets (MARTIN and CORLEY)

1934, 105, lvii

Microdetermination (BOR-
SOOK) 1935, 110, 481**Alligator mississippiensis:** Blood
(ROSENBLATT)

1936, 116, 81

Allocholane: 3(β)-Hydroxyetio-,
-17-one, adrenal tumor, iso-
lation (BUTLER and MAR-
RIAN) 1938, 124, 237**Allocholanic acid:** 3-Hydroxy-6-
keto-, bile, isolation (AN-
CHEL and SCHOENHEIMER)

1938, 124, 609

Allocholesterol: (SCHOENHEIMER
and EVANS)

1936, 114, 567

Absorption (SCHOENHEIMER,
DAM, and VON GOTTBERG)

1935, 110, 667

Body, absence (SCHOEN-
HEIMER, DAM, and VON
GOTTBERG)

1935, 110, 659

(EVANS) 1936, 115, 449

Allomethylose: *d*-, synthesis, 5-
tosyl monoacetone *l*-rham-

Allomethylose—*continued*:

nose hydrolysis, relation
(LEVENE and COMPTON)

1936, 116, 169

Allomethyloside: *d*-, theophylline, synthesis (LEVENE and COMPTON) 1937, 117, 37

Allomucic acid: *dl*-Alluronic acid synthesis from (NIEMANN, KARJALA, and LINK) 1934, 104, 189

Allothreonine: *d*-, preparation and nutrition value (WEST and CARTER)

1937-38, 122, 611

dl-, preparation (WEST, KRUMMEL, and CARTER)

1937-38, 122, 605

l-, preparation and nutrition value (WEST and CARTER)

1937-38, 122, 611

Alloxan: Alcohol oxidation, tissues, effect (BERNHEIM)

1938, 123, 741

Alluronic acid: *dl*-, allomucic acid synthesis (NIEMANN, KARJALA, and LINK)

1934, 104, 189

Altitude: Blood physicochemical properties, effect (DILL, TALBOTT, and CONSOLAZIO)

1937, 119, xxiii

— — system, effect (DILL, TALBOTT, and CONSOLAZIO)

1937, 118, 649

Hemoglobin oxygen affinity, effect (HALL)

1936, 115, 485

High, blood lactic acid, rest and work influence (EDWARDS) 1935, 114, xxx

Altrose: β -*l*-, *l*-ribose, preparation from, cyanhydrin re-

action (AUSTIN and HUMOLLER) 1934, 105, v

Aluminum: Biological material, determination, colorimetric (EVELETH and MYERS)

1936, 113, 449

Storage, intravenous injection effect (EVELETH and MYERS)

1936, 113, 467

Amandin: Osmotic pressure, molecular weight, and stability (BURK) 1937, 120, 63

Amide(s): Betaine, physiological activity (RENSHAW and HOTCHKISS)

1933, 103, 183

Metabolism (CARTER, HANDLER, BINKLEY, FISHBACK, RISSER, and WEISIGER)

1938, 123, xx

Rhubarb leaf, metabolism (VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN)

1938, 125, 527

Solutions, hemoglobin and pepsin properties (STEINHARDT) 1938, 123, 543

Tobacco leaf, metabolism (VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH)

1937, 119, 369

l-Tryptophane, growth and kynurenic acid production, effect (BAUGUESS and BERG)

1934, 106, 615

Amide nitrogen: Ovalbumin (SHORE, WILSON, and STUECK)

1935-36, 112, 407

Amine(s): Aliphatic, homologous series, optical rotations

Amine(s)—*continued*:

- (LEVENE and MARKER)
1936, 115, 267
- Configurationaly related,
rotatory dispersion (LEVENE,
ROTHEN, and KUNA)
1937, 120, 759
- Dithioethyl-, dietary cystine
substitute (MITCHELL)
1935, 111, 699
- Ethanol-, choline and, separa-
tion (CHARGAFF)
1937, 118, 417
- Iodoacetic acid reaction
(MICHAELIS and SCHUBERT)
1934, 106, 331
- β -Naphthyl-, metabolism
(WILEY) 1938, 123, cxxvii
1938, 124, 627
- Oxidation (BERNHEIM and
BERNHEIM) 1938, 123, 317
- β -Phenylpropyl-, nitrous acid
and nitrosyl chloride action
(LEVENE and MARKER)
1933, 103, 373
- Tertiary, iodoacetic acid ac-
tion (SCHUBERT)
1936, 116, 437

- Amino acids:** α -, bone phosphatase, effect (BODANSKY)
1936, 114, 273
- , deamination, structural
configuration influence
(SNYDER and CORLEY)
1937-38, 122, 491
- , α -ketonic acids, reaction
(HERBST and ENGEL)
1934, 107, 505
- , kidney and intestinal phos-
phatases, effect (BODANSKY)
1936, 115, 101

Amino acids—*continued*:

- α -, synthetic, subcutaneous in-
jection, fate (LEIGHTY and
CORLEY) 1937, 120, 331
- Acids and bases, gaseous,
combination (CZARNETZKY
and SCHMIDT)
1934, 105, 301
- Activity coefficients (SMITH
and SMITH)
1937, 119, xci
- Alga, marine (MAZUR and
CLARKE) 1938, 123, 729
- Aliphatic, activity, aqueous
solution (SMITH and SMITH)
1937, 121, 607
- and aromatic, configura-
tional relationships (LEVENE
and MARDASHEW)
1937, 117, 179
- , ionization, aqueous solution
(SMITH, TAYLOR, and
SMITH) 1937-38, 122, 109
- Basic, anlage, tissue proteins
(BLOCK) 1934, 105, 663
- , blood cell, red, posthemo-
lytic residue (BEACH, ERICK-
SON, BERNSTEIN, and
WILLIAMS)
1938, 123, vi
- , — serum proteins (BLOCK)
1933, 103, 261
(BLOCK, DARROW, and
CARY) 1934, 104, 347
(BLOCK) 1934, 105, 455
- , — — —, heat effect
(BLOCK) 1934, 104, 343
- , casein (VICKERY and
WHITE) 1933, 103, 413
- , equilibria, formol titration
(LEVY) 1935, 109, 365
- , finger nails and cattle horn
(BLOCK) 1934, 104, 339

Amino acids—continued:

Basic, hemoglobin, crystalline,
mammalian (BLOCK)

1934, 105, 663

—, keratins (BLOCK)

1934, 104, 339

—, *Limulus* hemocyanin
(MAZUR) 1937, 118, 631

—, metabolism (DOTY and
EATON) 1937-38, 122, 139

—, porcupine quills and
echidna spines (BLOCK and
HORWITT) 1937, 121, 99

—, proteins, determination
(BLOCK) 1934, 106, 457

Blood, adrenalectomy, insulin
and epinephrine effect (DAVIS
and VAN WINKLE)

1934, 104, 207

Brain, mammalian, proteins
(BLOCK) 1937, 119, 765

—, primate, proteins, sex
differences (BLOCK)

1937, 121, 411

— proteins, age effect (BLOCK)

1937, 120, 467

— —, sex differences (BLOCK)

1938, 123, xiii

Branched chain, catabolism
(CORLEY and SNYDER)

1937, 119, xx

Carbamate and, equilibrium
(STADIE and O'BRIEN)

1935-36, 112, 723

Carbamate-carbon dioxide
equilibrium, blood carbon
dioxide transport, relation
(STADIE and O'BRIEN)

1935, 109, lxxxvii

Carbon dioxide and, equilib-
rium (STADIE and O'BRIEN)

1935-36, 112, 723

Catabolism, phlorhizin effect

Amino acids—continued:

(CORLEY and LEIGHTY)

1936, 114, xxii

Compounds, alkaline mercuric
chloride effect (VICKERY and
GORDON) 1933, 103, 543

Creatine and creatinine excre-
tion, ingestion effect
(BODANSKY)

1935-36, 112, 615

— formation and storage, in-
jection effect (BEARD and
BOGGESE)

1936, 114, viii, 771

(BEARD, BOGGESE, and PIZ-
ZOLATO) 1937, 119, ix

Derivatives, spectroscopy
(FERAUD, DUNN, and KAP-
LAN) 1935-36, 112, 323

Deuterium oxide-treated, non-
labile deuterium (STEKOL
and HAMILL)

1937, 120, 531

— stability in (KESTON and
RITTENBERG)

1938, 123, lxxviii

Deutero-, formation, biologi-
cal, deuterium as indicator
(FOSTER, RITTENBERG, and
SCHOENHEIMER)

1938, 125, 13

Dielectric constants, aqueous
solutions (LINDQUIST and
SCHMIDT) 1937, 119, lxiii

Dissociation constants, appar-
ent acid, aqueous formalde-
hyde solution (DUNN and
LOSHAKOFF)

1936, 113, 691

(DUNN and WEINER)

1937, 117, 381

— —, —, water-ethanol mix-
tures (JUKES and SCHMIDT)

1934, 105, 359

Amino acids—continued:

Essential, adult (CORLEY,
WOLF, and NIELSEN)

1938, 123, xxvi

—, new, isolation and identification (MCCOY, MEYER, and
ROSE) 1935-36, 112, 283

Ethyl esters, vapor pressure-temperature reactions
(DUNN, SMART, REDEMANN,
and SMITH)

1934, 105, xxiii

Feeding, purified (CALDWELL
and ROSE)

1934, 107, 45, 57

(WOMACK and ROSE)

1935-36, 112, 275

Foods (CSONKA)

1935, 109, xxv

1936, 114, xxiii

Formaldehyde reaction (TOMI-
YAMA) 1935, 111, 51

(WADSWORTH and PANG-
BORN) 1936, 116, 423

(LEVY and SILBERMAN)

1937, 118, 723

Formamide and, compounds
(McMEEKIN)

1936, 114, lxvi

Formol titration, glass elec-
trode (DUNN and LOSHA-
KOFF) 1936, 113, 359

Growth utilization, isomerism,
optical, effect (TOTTER and
BERG) 1938, 123, cxxii

Hair, cow and chimpanzee
(BLOCK and LEWIS)

1938, 125, 561

Heats of solution and dilution
(ZITTLE and SCHMIDT)

1935, 108, 161

Hydrogen stability (KESTON
and RITTENBERG)

1938, 123, lxxviii

Amino acids—continued:

Hydrogen stability, deuterium
as indicator (RITTENBERG,
KESTON, SCHOENHEIMER,
and FOSTER)

1938, 125, 1

Hydroxy-, phosphoric esters,
synthesis (LEVENE and
SCHORMÜLLER)

1934, 105, 547

1934, 106, 595

Keto acid synthesis, acetyl
derivative, rôle (DU VI-
GNEAUD and IRISH)

1935, 109, xciv

1937-38, 122, 349

Kidney deamination, oxygen
tension effect (KEMPNER)

1938, 124, 229

Livetin, fractionation (JUKES)

1933, 103, 425

Metabolism (CHASE and
LEWIS) 1934, 106, 315

(BUTTS, DUNN, and HALL-
MAN) 1935-36, 112, 263

(BUTTS, BLUNDEN, and
DUNN) 1937, 119, 247

1937, 120, 289

(PAPAGEORGE and LEWIS)

1938, 123, 211

(BUTTS, DUNN, and HALL-
MAN) 1938, 123, 711

(BUTTS, BLUNDEN, and
DUNN) 1938, 124, 709

—, deuterium as indicator
(RITTENBERG, FOSTER, and
SCHOENHEIMER)

1938, 123, cii

Multivalent (GREENSTEIN)

1935, 109, 529, 541

(GREENSTEIN and JOSEPH)

1935, 110, 619

(GREENSTEIN)

1935-36, 112, 35, 517

Amino acids—continued:

- 1936, 116, 463
 1937, 118, 321
 1937, 121, 9
 1938, 124, 255
- Nail, finger, normal and
 arthritic (HESS)
 1935, 109, xliii
- Neuroproteins (BLOCK)
 1937, 119, xi
- Nitrogen, blood, determina-
 tion (DANIELSON)
 1933, 101, 505
- , —, insulin effect (POWERS
 and REIS) 1933, 101, 523
- Nutrition, influence (ROSE,
 KEMMERER, WOMACK,
 MERTZ, GUNTHER, MCCOY,
 and MEYER)
 1936, 114, lxxxv
- Oxidation, *Bacillus proteus*
 (BERNHEIM, BERNHEIM, and
 WEBSTER) 1935, 109, vi
 1935, 110, 165
- , — *pyocyaneus* (WEBSTER
 and BERNHEIM)
 1936, 114, 265
- , enzyme purification for
 (BERNHEIM and BERNHEIM)
 1935, 109, 131
- , keto acids and hydrogen
 peroxide production (BERN-
 HEIM, BERNHEIM, and GIL-
 LASPIE) 1936, 114, 657
- , silver oxide (HERBST and
 CLARKE) 1934, 104, 769
- Pepsin, crystalline, determina-
 tion (CALVERY, HERRIOTT,
 and NORTHROP)
 1936, 113, 11
- Physical properties and
 constants (DALTON and
 SCHMIDT) 1933, 103, 549
 1935, 109, 241

Amino acids—continued:

- Proteins, neurofibrils (BLOCK)
 1937, 119, xi
- Raman spectrum (EDSALL)
 1938, 123, xxxiii
- Related compounds, physical
 properties and constants
 (DALTON and SCHMIDT)
 1935, 109, 241
- substances, creatine forma-
 tion and storage, injection
 effect (BEARD, BOGGESS, and
 PIZZOLATO) 1937, 119, ix
- , —, dielectric constants,
 aqueous solutions (LIND-
 QUIST and SCHMIDT)
 1937, 119, lxiii
- , —, dissociation constants,
 apparent, water-ethanol
 mixtures (JUKES and
 SCHMIDT) 1934, 105, 359
- Salts, complex (BERGMANN and
 FOX) 1935, 109, 317
 (BERGMANN)
 1935, 110, 471
 1937-38, 122, 569
- Sodium chloride reaction
 (JOSEPH) 1935, 111, 489
- Solubility (COHN and Mc-
 MEEKIN) 1936, 114, xx
- , sulfuric acid (ANDREWS)
 1937, 119, v
- , water (DUNN, ROSS, and
 READ) 1933, 103, 579
- , water-ethyl alcohol mix-
 tures (DUNN, ROSS, and
 STODDARD)
 1937, 119, xxviii
 (DUNN and ROSS)
 1938, 125, 309
- Solutions, thermodynamic
 properties (SMITH)
 1938, 123, cx

Amino acids—continued:

- Specific heat (ZITTLE and SCHMIDT) 1935, 108, 161
- Spectroscopy (FERAUD, DUNN, and KAPLAN) 1935-36, 112, 323
- Stratum corneum, human keratins, comparison (WILKERSON) 1934, 107, 377
- Sulfur-containing, diet, cystine replaceability (BENNETT) 1938, 123, viii
- , growth effect (BRAND) 1938, 123, xv
- , nutrition deficiency, iodoacetic acid effect on (SIMON and WHITE) 1938, 123, cix
- Tetravalent, and derivatives, synthesis (GREENSTEIN) 1935, 109, 529
- Thallous chloride reaction (JOSEPH) 1935, 111, 489
- Titration, perchloric-acetic acid method (TOENNIES and CALLAN) 1938, 125, 259
- Trivalent, peptides (GREENSTEIN) 1933, 101, 603
- Wheat (CSONKA) 1937, 118, 147
- Zinc chloride reaction (JOSEPH) 1935, 111, 479
- Amino-5-azotoluene:** 2-, liver tumors, relation (SHEAR) 1936, 114, xc
- Aminobenzenesulfonamide:** *p*-. See Sulfanilamide
- Aminobenzoic acid:** *p*-, fate, rabbit (HARROW, MAZUR, and SHERWIN) 1933, 102, 35
- Amino compounds:** Semimercaptals, reactions (SCHUBERT) 1937, 121, 539

Aminocyclohexane: Carboxylic acids, polarity (GREENSTEIN and WYMAN)

- 1938, 123, xliv
- (2-Aminoethyl) disulfide:** *bis*-, cystine and methionine inadequacy, growth relation (JACKSON and BLOCK) 1936, 113, 135
- Amino group(s):** Free, insulin (JENSEN and EVANS) 1935, 108, 1
- , peptides and proteins, allocation (GURIN and CLARKE) 1934, 107, 395
- Aminoheptane:** 3-, norleucine, configurational relationship (LEVENE and KUNA) 1937-38, 122, 291
- Aminohexane:** 2-, norleucine, configurational correlation (LEVENE and MARDASHEW) 1937, 117, 707
- Amino- β -hydroxy-*n*-butyric acid(s):** α -, configuration, spatial (MEYER and ROSE) 1936, 115, 721
- , synthesis (CARTER) 1935-36, 112, 769
- (WOOD, MADDEN, and CARTER) 1937, 117, 1
- (WEST and CARTER) 1937, 119, 103, 109
- (WEST, KRUMMEL, and CARTER) 1937-38, 122, 605
- (WEST and CARTER) 1937-38, 122, 611
- See also Threonine
- Amino-2-hydroxypropane:** 1-, synthesis, new (LEVENE) 1936, 113, 153

- Amino-N-methylhistidine:** *dl*-, growth effect (FISHMAN and WHITE) 1936, 113, 175
l-, preparation from histidine (DU VIGNEAUD and BEHR-ENS) 1937, 117, 27
- Amino-N-methyltryptophane:** *d*-, growth effect (GORDON) 1938, 123, xliii
dl-, growth effect (GORDON) 1938, 123, xliii
 Synthesis and configurational relationships (CAHILL and JACKSON) 1938, 123, xviii
- Amino nitrogen:** Blood, determination, various methods, comparison (VAN SLYKE and KIRK) 1933, 102, 651
 Determination, manometric, iodine use (KENDRICK and HANKE) 1937, 117, 161
 Egg albumin, crystalline, hydrolysis, liberation rate (CALVERY, BLOCK, and SCHOCK) 1936, 113, 21
 Urine, determination, various methods, comparison (VAN SLYKE and KIRK) 1933, 102, 651
- Aminopeptidase:** Specificity (BERGMANN and FRUTON) 1937, 117, 189
- Aminophenol:** *p*-, liver xanthine oxidase, action (BERNHEIM and BERNHEIM) 1938, 123, 307
- Aminopolypeptidase:** Cystinyl peptides as substrates (GREENSTEIN) 1938, 124, 255
 Intestine, specificity (JOHNSON) 1937-38, 122, 89
- Aminopropionic acids:** Deamination, oxidative, liver and kidney tissues (RODNEY and GARNER) 1938, 125, 209
- Aminosorbitol hydrochloride:** Hydriodic acid, reduction (LEVENE and CHRISTMAN) 1938, 123, 77
- Amino sugar:** Determination (PALMER and MEYER) 1935, 109, lxxiii
- Aminotricarballylic acid:** α -, dissociation constants, apparent (GREENSTEIN and JOSEPH) 1935, 110, 619
dl- α -, derivatives (GREENSTEIN) 1936, 116, 463
- Ammonia:** Blood, determination (VAN SLYKE and HILLER) 1933, 102, 499
 Excretion, acidosis (ALVING and GORDON) 1937, 120, 103
 —, neutrality regulation, relation (BRIGGS) 1934, 104, 231
 Intestine (HERRIN) 1937, 118, 459
 Microdetermination (BOR-SOOK) 1935, 110, 481
 —, boric acid use (SOBEL, YUSKA, and COHEN) 1937, 118, 443
 Secretion, urine acid-base balance, nephritis, relation (BRIGGS) 1935, 109, xii
- Ammonium:** Urine, excretion (LOGAN) 1935, 109, 481
- Ammonium chloride:** Inorganic salts, metabolism, ingestion effect (WILEY, WILEY, and WALLER) 1933, 101, 73

Ammonium chloride—continued:

Water metabolism, ingestion effect (WILEY, WILEY, and WALLER) 1933, 101, 73

Amylase(s): Amylolytic activity determination (CALDWELL and HILDEBRAND)

1935, 111, 411

Barley malt, concentration and properties (CALDWELL and DOEBBELING)

1935, 110, 739

Blood serum, determination (THOMPSON, TENNANT, and WIES) 1935, 108, 85

Determination, starch substrate preparation (THOMPSON) 1935, 109, 201

Formation, barley, heavy water influence (CALDWELL and DOEBBELING)

1936, 114, xvii

1938, 123, 479

Malt, purification and properties (SHERMAN, CALDWELL, and DOEBBELING)

1934, 104, 501

—, ultrafiltration (SNELL)

1934, 104, 43

Saliva, inactivation, protease (TAUBER and KLEINER)

1934, 105, 411

Androgenic activity: Urine, acid hydrolysis effect (PETERSON, GALLAGHER, and KOCH)

1937, 119, 185, lxxvii

Androgenic substances: Blood lipids, effect (KOCHAKIAN, MACLACHLAN, and MC-EWEN)

1937-38, 122, 433

Excretion, testosterone effect (DORFMAN)

1938, 123, xxx

Androgenic substances—continued:

Inactive, blood and urine (McCULLAGH, OSBORN, and OSGARD) 1938, 123, lxxxi

—, urine, nature (PETERSON, HOSKINS, COFFMAN, and KOCH) 1938, 123, xciii

Androstenedione: Cortin-like substance, relation (MASON, MYERS, and KENDALL)

1936, 116, 267

Anemia: Abscess nitrogen metabolism, protein relation (DAFT, ROBSCHUIT-ROBINS, and WHIPPLE)

1937, 121, 45

Blood lipids and minerals, distribution, children (ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY)

1935, 109, xxx

Casein, deaminized, production (HOGAN and RITCHIE)

1934, 107, 179

(HOGAN and GUERRANT)

1936, 114, li

(HOGAN, GUERRANT, and RITCHIE) 1936, 115, 659

Diet relation, monkey (DAY, LANGSTON, and SHUKERS)

1936, 114, xxv

Hemoglobin, new formed (DAFT, ROBSCHUIT-ROBINS, and WHIPPLE)

1935, 108, 487

— production, liver function, nitrogen metabolism, liver injury by chloroform, effect (DAFT, ROBSCHUIT-ROBINS, and WHIPPLE)

1936, 113, 391

Anemia—continued:

- Hemolytic and hypochromic, blood lipid and mineral distribution, children (ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY) 1937, 118, 569
- Liver extract, potency determination (CLARK and COENE) 1936, 114, xix
- Metabolism, protein-free diet (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1933, 103, 495
- Milk iron and copper relation (KRAUSS and WASHBURN) 1936, 114, 247
- Milk-produced, cobalt, iron and copper with, effect (UNDERWOOD and ELVEHJEM) 1938, 124, 419
- , therapy (FITZ-HUGH, ROBSON, and DRABKIN) 1933, 103, 617
- Nutritional (HEINLE and BING) 1933, 101, 369
- (BING, SAURWEIN, and MYERS) 1934, 105, 343
- , blood copper (SCHULTZE, ELVEHJEM, and HART) 1936, 116, 107
- , — glutathione (SCHULTZE and ELVEHJEM) 1936, 116, 711
- , hemoglobin regeneration, iron and copper effect (SMITH and OTIS) 1937, 119, xcii
- , iron, parenteral administration (EVELETH, BING, and MYERS) 1933, 101, 359

Anemia—continued:

- Nutritional, tissue and organ copper and iron (SCHULTZE, ELVEHJEM, and HART) 1936, 116, 93
- , vitamin B complex, relation (KYER and BETHELL) 1935, 109, p. 1
- Pernicious, blood lipid and mineral distribution (WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY) 1937, 118, 599
- , principle, liver, chemical study (SUBBAROW and JACOBSON) 1936, 114, cii
- Protein catabolism (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1935, 108, 487
- Reticulocyte response, iron and copper effect (SCHULTZE and ELVEHJEM) 1933, 102, 357
- Tissue iron distribution (WAKEHAM and HALENZ) 1936, 115, 429
- Anesthesia:** Ether, urine ascorbic acid, effect (BOWMAN and MUNTWYLER) 1936, 114, xiv
- Anhydremia:** Insulin effect (CHAIKELIS) 1934, 105, 767
- Anhydro-l-cystinyl-l-cystine:** bis-, synthesis (GREENSTEIN) 1937, 118, 321
- Anhydrostrophanthidins:** (JACOBS and ELDERFIELD) 1935, 108, 693
- Anisic acid:** Isolation, tubercle bacillus, human, acetone-

- soluble fat (ANDERSON and NEWMAN) 1933, 101, 773
- Annelid:** Muscle (KURTZ and LUCK) 1935, 111, 577
- Anoxia:** Blood, turtle, effect (JOHLIN and MORELAND) 1933, 103, 107 (MORELAND) 1937, 117, 471
- Anserine:** *l*-1-Methylhistidine synthesis (BEHRENS and DU VIGNEAUD) 1937, 120, 517
- Muscle, mammalian, determination (ZAPP) 1938, 123, cxxxii
- , skeletal (WOLFF and WILSON) 1935, 109, 565
- Anthracene:** Derivatives, carcinogenic activity (SHEAR) 1938, 123, cviii
- Dibenz-, mitochondria lipid, effect (GOERNER) 1937-38, 122, 529
- Anthraquinone sulfonates:** Semi-quinones (HILL and SHAFER) 1936, 114, li
- Anticoagulant:** Blood, action (CHARGAFF and OLSON) 1937-38, 122, 153
- lipids, effect (BOYD and MURRAY) 1937, 117, 629
- Antigen(s):** Antibody union, multiple reactive groups, cross precipitation, relation (HEIDELBERGER and KENDALL) 1934, 105, xxxvii
- Artificial, glucose- and glucuronic acid-containing, immunological properties (GOEBEL and GOODNER) 1936, 114, xl
- Antigen(s)—continued:**
- Chemo-, carcinogenesis and (FRANKS and CREECH) 1938, 123, xxxviii
- Antiglyoxalase:** Kidney (WOODWARD, MUNRO, and SCHROEDER) 1935, 109, 11 (SCHROEDER, MUNRO, and WEIL) 1935, 110, 181
- Pancreas (WOODWARD, MUNRO, and SCHROEDER) 1935, 109, 11
- Antimony trichloride:** Monoheterocyclic ring compounds, 5-membered, reaction (LEVINE and RICHMAN) 1933, 101, 373
- Antioxidant:** Butter fat (SHREWSBURY and KRAYBILL) 1933, 101, 701
- Antithrombin:** Blood, factors affecting (QUICK) 1937, 119, lxxxii
- Antithrombogen:** Blood antithrombin, relation (QUICK) 1937, 119, lxxxii
- Antitrypsin:** Activity, egg white, nutritional disorder, relation (PARSONS) 1936, 116, 685
- Egg white (BALLS and SWENSON) 1934, 106, 409
- Apparatus:** Blood vapor pressure determination (CULBERT) 1935, 109, 547
- Carbon dioxide determination, yeast fermentation (FRANKE and MOXON) 1934, 105, 415
- Chemical reactions, fast, photoelectric method for recording (STERN and DU BOIS) 1936, 116, 575

Apparatus—continued:

- Colloid osmotic pressure, microdetermination (DUBACH and HILL) 1935-36, 112, 313
- Colorimeter, micro-, photoelectric (EVELYN and CIPRIANI) 1937, 117, 365
- , —, —, absorption cell (EVELYN and GIBSON) 1937-38, 122, 391
- , photoelectric (GOUDSMIT and SUMMERSON) 1935, 111, 421
- (DILLER) 1936, 115, 315
- , —, stabilized (EVELYN) 1936, 115, 63
- Electrode, ferricyanide, sugar determination (SHAFFER and WILLIAMS) 1935, 111, 707
- , hydrogen ion concentration determination, biological fluids (HORWITT) 1938, 123, lx
- , microquinhydrone (PIERCE and MONTGOMERY) 1935, 110, 763
- (PIERCE) 1935, 111, 501
- 1937, 117, 651
- Gasometric analysis, pipette, air-free reagents, storage (GUEST and HOLMES) 1935, 110, 781
- methods, Van Slyke, vessels for solution storage (HOLMES) 1936, 113, 411
- Histological sections, stained, color definition (KELLEY) 1935, 110, 141
- Hygrometer, chemical (CARPENTER) 1935-36, 112, 123

Apparatus—continued:

- Magnesium determination, 8-hydroxyquinoline, titration flask (GREENBERG, ANDERSON, and TUFTS) 1935, 111, 561
- Metabolism, small animals (WERTHESEN) 1937, 119, 233
- Milking, small laboratory animals (COX and MUELLER) 1936, 114, xxii
- Mineral analysis, evaporation, concentrated salt solutions (GUEST and LEVA) 1935, 110, 777
- Photometer, photoelectric, vitamin A determination (BILLS and WALLENMEYER) 1938, 123, xi
- Rehberg burette, modified, titration, mercury-reacting solutions (LONGWELL and HILL) 1935-36, 112, 319
- Respiration, stack, constant volume (BENEDICT) 1936, 116, 307
- Respiratory exchange, small animals, automatic (LEWIS and LUCK) 1933, 103, 209
- Tonometer, blood equilibration (IRVING and BLACK) 1937, 118, 337
- Apple:** Coloring matter (SANDO) 1937, 117, 45
- Leaf tissue, starch polysaccharide, isolation and properties (NIEMANN, ANDERSON, and LINK) 1936, 116, 447
- Tree, woody tissue, starch polysaccharide, isolation and

- properties (NIEMANN, ROBERTS, and LINK) 1935, 110, 727
- Aqueous humor:** Calcium (SALIT) 1934, 104, 275
- Cerebrospinal fluid, lymph, and blood, comparison (WALKER) 1933, 101, 269
- Hydrogen ion concentration determination, microquinhedron electrode, rachitic and normal rats (PIERCE) 1935, 111, 501
- Inorganic phosphate, frog and higher animals (WALKER) 1933, 101, 269
- Reducing substances, frog and higher animals (WALKER) 1933, 101, 269
- Urea, frog and higher animals (WALKER) 1933, 101, 269
- Uric acid, frog and higher animals (WALKER) 1933, 101, 269
- Arabinose:** 5-Phospho-*d*-, synthesis (LEVENE and CHRISTMAN) 1938, 123, 607
- Arabofuranoside:** Monoacetone *l*-, preparation (LEVENE and COMPTON) 1936, 116, 189
- Arachidonic acid:** Butter fat (BOSWORTH and SISSON) 1934, 107, 489
- Chemistry (AULT and BROWN) 1934, 107, 615
- Determination (AULT and BROWN) 1934, 107, 615
- Arachin:** Methionine, limiting nutritive factor of (BEACH and WHITE) 1937, 119, viii
- Aragonite:** Solubility, salt solutions (BROWMAN and HASTINGS) 1937, 119, 241
- Arbacia punctulata:** Egg, nucleic acid (BLANCHARD) 1935, 108, 251
- Arctomys monax:** See Woodchuck
- Arginase:** Activation (WEIL) 1935, 110, 201
- , metal ions, rôle (HELLERMAN and PERKINS) 1935-36, 112, 175
- Blood (WEIL and RUSSELL) 1934, 106, 505
- Jack bean (STOCK, PERKINS, and HELLERMAN) 1938, 125, 753
- Kidney, activity, distribution (WEIL and ELY) 1935-36, 112, 565
- Liver, activation, metal ions, rôle (HELLERMAN and STOCK) 1938, 125, 771
- , age effect (LIGHTBODY) 1938, 124, 169
- , myasthenia gravis (MILHORAT) 1935, 111, 379
- Microdetermination, manometric (WEIL and RUSSELL) 1934, 106, 505
- Proteins, action (KRAUS-RAGINS) 1938, 123, 761
- Specificity (CALVERY and BLOCK) 1934, 107, 155 (HELLERMAN and STOCK) 1938, 125, 771
- Urease, crystalline, non-identity (SUMNER and DOUNCE) 1937, 119, xcvi
- Arginine:** *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1937, 118, 363

Arginine—continued:

Citrulline preparation, hydrolysis (FOX)

1938, 123, 687

Determination, color stabilization (THOMAS)

1938, 123, cxxi

Dietary, creatine-creatinine production, growth, effect (MEYER and ROSE)

1933, 102, 461

— essential, chick (KLOSE, STOKSTAD, and ALMQUIST)

1938, 123, 691

Fatty acids, combination (JUKES and SCHMIDT)

1935, 110, 9

Growth factor, chick, relation (ARNOLD, KLINE, ELVEHJEM, and HART)

1936, 116, 699

Hydrolysis, metal ions and urease, effect (HELLERMAN and PERKINS)

1935-36, 112, 175

Peptides, physical constants (GREENSTEIN)

1933, 101, 603

Placenta (GRAFF and GRAFF)

1937, 121, 79

Tissue, determination (GRAFF, MACULLA, and GRAFF)

1937, 121, 71

Aromatic acids: Uric acid excretion, relation (QUICK)

1934, 105, lxix

Arsanilic acid: Protein compound formation (BOYD and HOOKER)

1934, 104, 329

Arteriosclerosis: Nerve lipids, effect (RANDALL)

1938, 125, 723

Arthritis: Nail, finger, amino acids (HESS)

1935, 109, xliii

Ascorbic acid: Benzidine blood test, inhibition (KOHN and WATROUS)

1938, 124, 163

Blood plasma, determination (MINDLIN and BUTLER)

1937-38, 122, 673

—, reduced, partition (STEPHENS and HAWLEY)

1936, 115, 653

— serum phosphatase activation (THANNHAUSER, REICHEL, and GRATTA)

1937, 121, 697

Cystinuria, effect (ANDREWS, ANDREWS, and RUTENBER)

1938, 123, iii

Dehydro-, reduction, guinea pig tissue (SCHULTZE, STOTZ, and KING)

1937-38, 122, 395

✓ Determination (TAUBER and KLEINER)

1935, 108, 563

✓ —, colorimetric, dichlorophenol indophenol titration method, comparison (ROE)

1935, 109, lxxv

—, glucoreductone for 2,6-dichlorophenol indophenol standardization (KERTESZ)

1934, 104, 483

—, photometric, phosphotungstic acid use (KASSELL and BRAND)

1938, 125, 115

—, Tillmans method, study (MACK and TRESSLER)

1937, 118, 735

—, various methods, comparison (ROE)

1936, 116, 609

Ascorbic acid—continued:

- Formaldehyde, reaction (WEST and NEY) 1937, 119, cii
- Galacturonic acid as precursor (JOHNSTIN and POTTER) 1935, 110, 279
- l*-, and sodium salt, Raman spectra (EDSALL) 1936, 114, xxviii
- Organ vitamin C, administration with thyroid, α -dinutrophenol, and cortical hormone extract, effect (SVIRBELY) 1935, 111, 147
- Oxidase (TAUBER, KLEINER, and MISHKIND) 1935, 110, 211
- , copper relation (STOTZ, HARRER, and KING) 1937, 119, xcv, 511
- , vegetables (KERTESZ, DEARBORN, and MACK) 1936, 116, 717
- Oxidation and reduction (BOROOK, DAVENPORT, JEFFREYS, and WARNER) 1937, 117, 237
- , biological fluids, effect (BARRON, BARRON, and KLEMPERER) 1936, 116, 563
- , catalytic, metaphosphoric acid effect (LYMAN, SCHULTZE, and KING) 1937, 118, 757
- , copper and hemochromogens as catalysts (BARRON, DEMEIO, and KLEMPERER) 1935-36, 112, 625
- , liver effect (STOTZ, HARRER, SCHULTZE, and KING) 1937-38, 122, 407

Ascorbic acid—continued:

- Oxidation, mechanism (BARRON, DEMEIO, and KLEMPERER) 1935-36, 112, 625
- Oxidation-reduction (BALL) 1937, 118, 219
- potentials (FRUTON) 1934, 105, 79
- Phospho-18-tungstic acid, reaction (SHINOHARA and PADIS) 1935-36, 112, 697
- System, oxidation-reduction potentials (BALL) 1936, 114, vii
- Urine, determination, phospho-18-tungstic acid (SHINOHARA and PADIS) 1935-36, 112, 709
- , ether anesthesia effect (BOWMAN and MUNTWYLER) 1936, 114, xiv
- See also* Vitamin C
- Ash: Tissue, dietary inorganic salts, relation (EPPRIGHT and SMITH) 1937, 118, 679
- Asparaginase: Activity, hydrolytic (McMEEKIN) 1938, 123, lxxxii
- Preparation (McMEEKIN) 1938, 123, lxxxii
- Asparagine: Tobacco leaves (VICKERY and PUCHER) 1936, 113, 157
- Aspartic acid(s): *dl*-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 119, 247
- (BUTTS, DUNN, and BLUNDEN) 1937, 119, xv
- l*-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 119, 247
- (BUTTS, DUNN, and BLUNDEN) 1937, 119, xv

Aspartic acid(s)—*continued*:

Peptide, physical constants
(GREENSTEIN)

1933, 101, 603

Synthesis (DUNN and FOX)

1933, 101, 493

Aspartyl-*l*-histidine: β -*l*-, *l*-carnosine precursor (DU VIGNEAUD and HUNT)

1938, 125, 269

Aspergillus niger: Fatty acids, formation, from glucose (SCHMIDT)

1935, 110, 511

Aspergillus parasiticus: Peptidase system (JOHNSON and PETERSON)

1935-36, 112, 25

Aspergillus sydowi: Arginine, histidine, and lysine isolation (WOOLLEY and PETERSON)

1937, 118, 363

Choline sulfate, cyclic, isolation (WOOLLEY and PETERSON)

1937-38, 122, 213

Leucine and isoleucine isolation (WOOLLEY and PETERSON)

1936, 114, 85

Monoaminomonocarboxy and monoaminodicarboxy acids, isolation (WOOLLEY and PETERSON)

1937, 121, 507

Nitrogenous compounds, isolation (WOOLLEY and PETERSON)

1937, 119, cvii

Assimilation: (*See note on p. 221*)

Aucuba: Mosaic virus protein, ultracentrifugal analysis (WYCKOFF)

1938, 124, 585

—, tobacco mosaic protein, crystalline, relation (STANLEY)

1937, 117, 325

Audouinia spirabanchus: Tau-rine (KURTZ and LUCK)

1935, 111, 577

Avitaminosis: Enzyme efficiency (SURE, KIK, and BUCHANAN)

1935, 108, 19, 27

Oxygen uptake, tissues (SURE and DEWITT)

1938, 123, cxx

Vitamin A, nerve degeneration, relation (SUTTON, SETTERFIELD, and KRAUSS)

1934, 105, lxxxix

Avocado: -Rich diet, growth and body fat, influence (McAMIS and SWEET)

1936, 114, lxiv

Azelaic acid: Metabolism (SMITH)

1933, 103, 531

Azides: Configurationally related, optical rotations (LEVENE and ROTHEN)

1936, 115, 415

Azochloramid: Sodium hypochlorite, chloramine-T, and, organic substrates, comparative action (GUITERAS and SCHMELKES)

1934, 107, 235

Azoproteins: (BOYD and HOOKER)

1934, 104, 329

(BOYD and MOVER)

1935, 110, 457

Azotobacter: Nitrogen gas, solubility and absorption (LINEWEAVER)

1937-38, 122, 549

B

Bacillus: Acid-fast, biological activity, proteins, nitrogen partition, relation (SEIBERT and MUNDAY)

1933, 101, 763

Bacillus—continued:

Diphtheria. *See* Diphtheria bacillus

Leprosy. *See* Leprosy bacillus
Timothy-grass. *See* Timothy-grass bacillus

Tubercle. *See* Tubercle bacillus

See also Escherichia coli, Lactobacillus acidophilus

Bacillus aertrycke: Citric acid decomposition (BRUCE)
1934, 107, 119

Bacillus Calmette-Guérin: Fractions, properties (CHARGAFF and SCHAEFER)
1935, 109, xix

Polysaccharide, specific (CHARGAFF and SCHAEFER)
1935-36, 112, 393

Bacillus lepræ: *See* Leprosy bacillus

Bacillus proteus: Amino acid oxidation (BERNHEIM, BERNHEIM, and WEBSTER)
1935, 109, vi
1935, 110, 165

Bacillus pyocyaneus: Amino acid oxidation (WEBSTER and BERNHEIM)
1936, 114, 265

Bacillus subtilis: Nuclease activity (MACFADYEN)
1934, 107, 297

Bacteria: Colon. *See* Colon bacteria

Dehydrogenase activity *in vivo* (GOULD and SIZER)
1938, 124, 269

Enzymes, creatinine-decomposing (DUBOS and MILLER)
1937, 121, 429

Bacteria—continued:

Enzymes, proteolytic (BERGER, JOHNSON, and PETERSON)
1938, 124, 395

Lactic acid, riboflavin and synthetic flavins, growth effect (SNELL and STRONG)
1938, 123, cxii

Metabolism (BLANCHARD and MACDONALD)
1935, 110, 145

Peptidase systems, properties (BERGER and JOHNSON)
1938, 123, ix

Photosynthetic, chromoproteins (FRENCH)
1938, 123, xxxviii

Propionic acid, glucose dissimilation, mechanism (WOOD and WERKMAN)
1934, 105, 63

See also Azotobacter, Clostridium, Corynebacterium

Bacterium tumefaciens: Lipid fractions, chemistry (CHARGAFF)
1938, 123, xxi

Lipids (CHARGAFF and LEVINE)
1938, 124, 195

Barbituric acid: Iso-, metabolism, growing dog (CERECEDO and STEKOL)
1934, 107, 425

Barley: Amylase formation, heavy water influence (CALDWELL and DOEBBELING)
1936, 114, xvii
1938, 123, 479

Malt, amylase, concentration and properties (CALDWELL and DOEBBELING)
1935, 110, 739

Basal metabolism: Boys and girls (WANG)
1937, 119, cii

Basal metabolism—*continued*:

Eskimo (LEVINE)

1937, 119, lxi

Nembutal effect (CAVETT)

1937, 119, xvii

Phosphorus-deficient diet
(GOSS and KLEIBER)

1937, 119, xxxviii

Base(s): Blood, determination
(HALD)

1933, 103, 471

—, distribution (HALD and
EISENMAN)

1937, 118, 275

— serum, determination
(HALD)

1933, 103, 471

— —, exercise, dehydration
influence (MORSE and
SCHLUTZ)

1936, 114, lxxiv

— —, kidney excretion, exer-
cise effect (MORSE and
SCHLUTZ)

1937, 119, lxxi

Fixed, excretion, alkalosis of
overventilation (BRIGGS)

1937, 119, xv

Gaseous, amino acids and pro-
teins, combination (CZAR-
NETZKY and SCHMIDT)

1934, 105, 301

Microdetermination, boric acid
use (SOBEL, YUSKA, and
COHEN)

1937, 118, 443

Organic. *See* Organic bases
Total, blood and biological
fluids, determination (KEYS)

1936, 114, 449

—, — serum, determination
(HALD)

1934, 105, 675

—, — serum, chloride and,
microdetermination, simul-
taneous (JOSEPH and
STADIE)

1938, 123, lxxv

1938, 125, 795

Bean: Black, proteins (JONES,
GERSDORFF, and PHILLIPS)

1937-38, 122, 745

Jack, arginase (STOCK, PER-
KINS, and HELLERMAN)

1938, 125, 753

—, globulin, crystalline, from
canavalin (SUMNER and
HOWELL)

1936, 113, 607

—, hemagglutinin, inactiva-
tion, reversible, divalent
metals, relation (SUMNER
and HOWELL)

1936, 115, 583

Navy, meal, bromobenzene and
l-cystine supplement, growth
effect (STEKOL)

1937-38, 122, 55

Soy, saponin (BURRELL and
WALTER)

1935, 108, 55

— *See also* Soy bean oil**Bee-moth:** Reducing substances,
metamorphosis effect (CRES-
CITELLI and TAYLOR)

1935, 108, 349

Beet: Root pigment, red, deter-
mination (PUCHER, CURTIS,
and VICKERY)

1938, 123, 71

— —, —, preparation (PUCH-
ER, CURTIS, and VICKERY)

1938, 123, 61

Sugar. *See* Sugar-beet**Bence-Jones:** Protein (CALVERY
and FREYBERG)

1935, 109, 739, xv

—, blood serum (KYDD)

1934, 107, 747

Benedict, Stanley Rossiter:
Obituary (SHAFFER)

1937, 117, preceding p. 429

Benzaldehyde: Oxidation
(MEYER)

1933, 103, 25

- Benzene:** Bromo-, absorption and detoxication, bile rôle (STEKOL and MANN) 1937, 117, 619
—, *p*-bromophenylmercapturic acid synthesis, relation (STEKOL) 1937, 118, 155
—, cystine utilization, growth, effect (WHITE and JACKSON) 1935, 111, 507
—, dietary, growth effect (STEKOL) 1937-38, 122, 55
—, glutathione and, growth relation (STEKOL) 1938, 123, cxvi
—, methionine utilization, growth, effect (WHITE and JACKSON) 1935, 111, 507
Monobromo-, detoxication (HALEY and SAMUELSEN) 1937, 119, 383
- Benzenesulfonamide:** *See* Sulfanilamide
- Benzidine:** Blood test, ascorbic acid effect (KOHN and WATROUS) 1938, 124, 163
- Benzoic acid:** *p*-Acetyl amino-, formation, rabbit (HARROW, MAZUR, BOREK, and SHERWIN) 1934, 105, xxxiv
p-Amino-, fate, rabbit (HARROW, MAZUR, and SHERWIN) 1933, 102, 35
Detoxication, inorganic salts, effect (GRIFFITH) 1935, 109, xxxix (SHEPPECK and GRIFFITH) 1936, 114, xcii
3,5-Dinitro-, blood creatine determination (ANDES) 1937, 119, iv
Uric acid excretion, liver disease, influence (QUICK) 1935, 110, 107
- Benzoylglucuronic acid:** Structure (GOEBEL) 1937-38, 122, 649
- Benzyl butyrate:** Enzyme hydrolysis (BALLS and MATLACK) 1938, 125, 539
- Benzyl chloride:** Benzylmercapturic acid, conversion, animal organism (STEKOL) 1938, 124, 129
- Benzylcysteine:** S-, benzylmercapturic acid, conversion, animal organism (STEKOL) 1938, 124, 129
- Benzylcysteinylglycine:** Crystalline, synthesis and isolation from glutathione (LORING and DU VIGNEAUD) 1935, 111, 385
- Benzyl group:** Carbobenzoxy derivatives and benzylthio ethers, splitting (SIFFERD and DU VIGNEAUD) 1935, 108, 753
- Benzylmercapturic acid:** Benzyl chloride relation, animal organism (STEKOL) 1938, 124, 129
S-Benzylcysteine relation, animal organism (STEKOL) 1938, 124, 129
- Benzyl stearate:** Enzyme hydrolysis (BALLS and MATLACK) 1938, 125, 539
- Benzylthio ethers:** Benzyl group splitting (SIFFERD and DU VIGNEAUD) 1935, 108, 753
- Beryllium:** Rickets, "local factor" and viosterol, rôle (SOBEL, GOLDFARB, and KRAMER) 1935, 108, 395

Be-still nut: Constituents (CHEN and CHEN)

1934, 105, 231

Betaine(s): Polarity (EDSALL and WYMAN) 1934, 105, xxiv
Raman spectrum (EDSALL)

1938, 123, xxxiii

Betaine amides: Physiological activity (RENSHAW and HOTCHKISS)

1933, 103, 183

Betanin: Beet root, determination (PUCHER, CURTIS, and VICKERY) 1938, 123, 71

— —, preparation (PUCHER, CURTIS, and VICKERY)

1938, 123, 61

Bile: Bile acids, analysis, differential (DOUBILET)

1936, 114, 289

Bilirubin determination, oxidative, photoelectric colorimeter (MALLOY and EVELYN) 1937-38, 122, 597

— isolation (GIBSON and LOWE) 1938, 123, xli

Blood plasma cholesterol esterification, effect (RIEGEL, RAYDIN, and ROSE)

1937, 120, 523

Bromobenzene absorption and detoxication, rôle (STEKOL and MANN)

1937, 117, 619

Calculi, human (RAY)

1935, 111, 689

Cholesterol, free and combined, determination (RIEGEL and ROSE) 1936, 113, 117

Fistula, blood serum and bile phosphatase activation, effect (THANNHAUSER, REICHEL, GRATAN, and MADDOCK) 1937, 121, 715

Bile—continued:

Hog, lithocholic acid gallstone (SCHOENHEIMER and JOHNSTON) 1937, 120, 499

3-Hydroxy-6-ketoallocholan acid isolation (ANCHEL and SCHOENHEIMER)

1938, 124, 609

Kynurenic acid effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

— — excretion, kynurenic acid and *l*- and *dl*-tryptophane administration effect (CORRELL, BERG, and COWAN)

1938, 123, 151

Naphthalene absorption and detoxication, rôle (STEKOL and MANN)

1937, 117, 619

Obstruction, blood serum phosphatase activation, effect (THANNHAUSER, REICHEL, GRATAN, and MADDOCK)

1937, 121, 709

Sodium cholate, thyroxine effect (SCHMIDT)

1937, 119, lxxxvii

dl-Tryptophane effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

l-Tryptophane effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

Vitamin D absorption and excretion, effect (HEYMANN)

1937-38, 122, 249

— — —, rôle (GREAVES and SCHMIDT)

1933, 102, 101

Bile acid(s): Bile and duodenal drainage, analysis, differential (DOUBILET)

1936, 114, 289

Bile acid(s)—*continued*:

- Blood serum phosphatase activity, effect (THANN-HAUSER, REICHEL, GRAT-TAN, and MADDOCK)
1937, 121, 721
- Conjugated, synthesis (COR-TESE and BAUMAN)
1936, 113, 779
(CORTESE and BASHOUR)
1937, 119, 177
- Formation, deuterium as indi-cator (SCHOENHEIMER, RIT-TENBERG, BERG, and ROUS-SELOT)
1936, 115, 635
- Hemolytic properties (BER-LINER)
1937, 119, xi
- —, structure relation (BER-LINER and SCHOENHEIMER)
1938, 124, 525
- Phosphatase identification, use (BODANSKY)
1937, 118, 341
- Bile duct:** Ligation, blood plasma cholesterol and phospholipid phosphorus, effect (CHAN-UTIN and LUDEWIG)
1936, 115, 1
- Bile salts:** Blood serum choles-terol esters, enzymatic syn-thesis and hydrolysis, effect (SPERRY and STOYANOFF)
1937, 119, xciii
1937, 121, 101
- Body fluids, determination by bile salt hemolysis (LICHT-MAN)
1934, 107, 717
- Cholesterol digitonide precipi-tation, effect (BASHOUR and BAUMAN)
1937, 117, 551
- solubility (BASHOUR and BAUMAN)
1937, 121, 1

- Bilirubin:** Bile, determination, oxidative, photoelectric colorimeter (MALLOY and EVELYN)
1937-38, 122, 597
- , isolation (GIBSON and LOWE)
1938, 123, xli
- Blood serum, jaundice (BO-DANSKY and JAFFE)
1935, 109, x
- Determination, photoelectric colorimeter (MALLOY and EVELYN)
1937, 119, 481
- Isolation and detection (MAY, MARTINDALE, and BOYD)
1934, 104, 255
- Kidney threshold (BENSLEY)
1933, 103, 71
- Meconium, determination, oxi-dative, photoelectric colorim-eter (MALLOY and EVELYN)
1937-38, 122, 597
- Biochemical reactions:** Reaction velocity (BODANSKY)
1937, 120, 555
- Biological fluid(s):** (*See note on p. 221*)
- Ascorbic acid oxidation, effect (BARRON, BARRON, and KLEMPERER)
1936, 116, 563
- Base, total, determination (KEYS)
1936, 114, 449
- Biological material:** (*See note on p. 221*)
- Biological system(s):** (*See note on p. 221*)
- Directive influences (FALK)
1933, 103, 363
(McGUIRE and FALK)
1934, 105, 669

Bipyridine: Iron, available, determination, use in (KOH-
LER, ELVEHJEM, and HART)
1936, 113, 49

Bird: Blood, oxygen dissociation
curves (CHRISTENSEN and
DILL) 1935, 109, 443

Liver lipids (LORENZ, CHAI-
KOFF, and ENTENMAN)
1938, 123, 577

Orosins, relationship (BLOCK)
1934, 105, 455

See also Chick, Chicken, Fowl,
Hen

Bixin: Solutions, carotene de-
termination, use (HOLMES
and BROMUND)
1935-36, 112, 437

Black tongue: Anti-, factor,
identification (ELVEHJEM,
MADDEN, STRONG, and
WOOLLEY)
1938, 123, 137

Pyridine derivatives, effect
(WOOLLEY, STRONG, and
MADDEN)
1938, 123, cxxxii
(WOOLLEY, STRONG, MAD-
DEN, and ELVEHJEM)
1938, 124, 715

Blood: (*See note on p. 221*)

Acid-base (ROBINSON, PRICE,
and CULLEN)

1934, 106, 7
1935, 109, lxxiv
1936, 114, 321

(ROBINSON, PRICE, HOGDEN,
NELSON, and CULLEN)

1936, 114, lxxxiv

— equilibrium (HASTINGS and
SHOCK) 1934, 104, 575
(SHOCK and HASTINGS)

1934, 104, 585

Blood—continued:

Acid-base equilibrium, displace-
ment (SHOCK and HASTINGS)
1935-36, 112, 239

— —, microdetermination
(SHOCK and HASTINGS)
1934, 104, 565

—, nomogram (HASTINGS and
SHOCK) 1934, 104, 575

—, work, effect (HASTINGS,
DILL, and EDWARDS)
1936, 114, xlvii

Acid change, first (LAUG)
1934, 106, 161

Alligator mississippiensis
(ROSENBLATT)
1936, 116, 81

Androgenic material, inactive
(McCULLAGH, OSBORN, and
OSGARD) 1938, 123, lxxxi

Anemia, milk-produced (FITZ-
HUGH, ROBSON, and DRAB-
KIN) 1933, 103, 617

Aqueous humor, cerebrospinal
fluid, and lymph, compari-
son (WALKER)

1933, 101, 269

Arterial, carbon dioxide
capacity, carbon dioxide
inhalation effect (HIMWICH,
GILDEA, RAKIETEN, and
DuBOIS) 1936, 113, 383

Base, determination (HALD)
1933, 103, 471

—, distribution (HALD and
EISENMAN)
1937, 118, 275

—, total, determination
(HALD) 1934, 105, 675
(KEYS) 1936, 114, 449

Coagulant, placenta (GREEN,
LOWRY, ELEY, and Mc-
KHANN) 1936, 114, xlii

Blood—continued:

- Coagulation, blood platelet constituents and lipids, relation (CHARGAFF, BANCROFT, and STANLEY-BROWN) 1936, 116, 237
- , cerebroside sulfuric acids, synthetic, effect (CHARGAFF) 1937, 121, 187
- , heparin and anticoagulants, action (CHARGAFF and OLSON) 1937-38, 122, 153
- , inhibition, substances affecting (CHARGAFF, BANCROFT, and STANLEY-BROWN) 1936, 115, 155
- , —, technique for measuring (CHARGAFF, BANCROFT, and STANLEY-BROWN) 1936, 115, 149
- , lipid inhibitor, spleen (CHARGAFF) 1938, 125, 677
- , — inhibitors (CHARGAFF) 1937, 121, 175
- , protamine effect (CHARGAFF and OLSON) 1937-38, 122, 153
- , protamines, effect (CHARGAFF) 1938, 125, 671
- Dissociation constant, apparent, oxygenation and reduction effect (VAN SLYKE and SENDROY) 1933, 102, 505
- Electrolyte distribution, glucose intraperitoneal injection effect (ROBINSON and HEGNAUER) 1936, 116, 779
- , muscle and, distribution, adrenalectomy effect (HEGNAUER and ROBINSON) 1936, 116, 769

Blood—continued:

- Equilibration, tonometer (IRVING and BLACK) 1937, 118, 337
- Ethyl iodide solubility, erythrocyte count, correlation (COOL, GAMBLE, and STARR) 1934, 105, 97
- Fatty acids, adrenalectomy effect (YEAKEL and BLANCHARD) 1938, 123, 31
- —, depancreatized dog (LICHTMAN) 1937, 120, 35
- —, microdetermination (SMITH and KIRK) 1933, 103, 391
- Filtrates, protein-free, zinc hydroxide powder for preparation (LETONOFF) 1934, 106, 693
- Fish (VARS) 1934, 105, 135
- Flow, kidney, measurement, direct (MASON, BLALOCK, and HARRISON) 1936, 114, lxiv
- Fowl, domestic, properties (MORGAN and CHICHESTER) 1935, 110, 285
- Gas analysis, Van Slyke (RAPPAPORT and KÖCK-MOLNAR) 1934, 104, 29
- and electrolyte equilibrium (VAN SLYKE and SENDROY) 1933, 102, 505
- (VAN SLYKE, DILLON, and MARGARIA) 1934, 105, 571
- (SENDROY, DILLON, and VAN SLYKE) 1934, 105, 597
- determination, collection methods (LOONEY and CHILDS) 1934, 104, 53

Blood—continued:

- Gas, exercise effect (LOONEY)
1938, 123, lxxvi
- Glycolysis, purine nucleotide
catabolism, relation (EILER
and ALLEN)
1938, 123, 655
- rate, mammal (SOMOGYI)
1933, 103, 665
- Helium solubility in (HAWKINS
and SHILLING)
1936, 113, 649
- Hen, composition (HELLER and
PURSELL) 1937, 118, 549
- Inorganic composition (KERR)
1937, 117, 227
- Intestinal juice loss, effect
(HERRIN) 1935, 108, 547
- Jaundiced, blood serum phos-
phatase effect (FREEMAN and
CHEN) 1938, 123, 239
- Lactation, cod liver oil, shark
liver oil, and salmon oil,
effect (McCAY and MAY-
NARD) 1935, 109, 29
- Lipid chlorine (CHRISTEN-
SEN and CORLEY)
1938, 123, 129
- distribution, anemia,
children (ERICKSON, COPE,
STERNBERGER, LEE, COOLEY,
and MACY) 1935, 109, xxx
(ERICKSON, WILLIAMS, HUM-
MEL, LEE, and MACY)
1937, 118, 569
- —, pernicious (WIL-
LIAMS, ERICKSON, BERN-
STEIN, HUMMEL, and MACY)
1937, 118, 599
- —, children (ERICKSON,
WILLIAMS, HUMMEL, and
MACY) 1937, 118, 15

Blood—continued:

- Lipid metabolism, depancrea-
tized dog, insulin and choline
effect (KAPLAN and CHAI-
KOFF) 1937, 120, 647
- Lipids, age, sex, and ovarian
activity, effect (LORENZ,
ENTENMAN, and CHAIKOFF)
1937-38, 122, 619
- , androgens, effect (KOCHA-
KIAN, MACLACHLAN, and
McEWEN)
1937-38, 122, 433
- , anticoagulants, effect
(BOYD and MURRAY)
1937, 117, 629
- , depancreatized dog, insulin
effect (CHAIKOFF and
KAPLAN) 1934, 106, 267
- , — with insulin, pancreas
ingestion effect (CHAIKOFF
and KAPLAN)
1935-36, 112, 155
- , determination and parti-
tion (ROSE, SCHATTNER, and
EXTON) 1937, 119, lxxxiv
- , extraction (BOYD)
1936, 114, 223
- , — and saponification (MAN
and GILDEA)
1937-38, 122, 77
- , fasting effect (SURE, KIK,
and CHURCH)
1933, 103, 417
- , liver damage influence
(CHANUTIN and LUDEWIG)
1936, 114, xviii
- , overfeeding effect (BLOOR)
1933, 103, 699
- , regeneration, hemorrhage
effect (BOYD and STEVEN-
SON) 1937-38, 122, 147

Blood—continued:

- Lipids, thyroxine injection effect (SCHMIDT and BRADFORD) 1934, 105, lxxv
 —, total, lipemia, alimentary (WILSON and HANNER) 1934, 106, 323
 Magnesium deprivation effect (ORENT, KRUSE, and MCCOLLUM) 1934, 106, 573
 — — with calcium deficiency, effect (DAY, KRUSE, and MCCOLLUM) 1935-36, 112, 337
 Milk fat precursor in (MAYNARD, HODSON, ELLIS, and McCAY) 1937, 119, lxvi
 Mineral constituents, inorganic salt intake, effect (HELLER and PAUL) 1934, 105, 655
 — distribution, anemia, children (ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY) 1935, 109, xxx
 (ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY) 1937, 118, 569
 — —, —, pernicious (WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY) 1937, 118, 599
 — —, children (ERICKSON, WILLIAMS, HUMMEL, and MACY) 1937, 118, 15
 Muscle, volume determination (EICHELBERGER) 1937-38, 122, 323
 Nitrogen solubility in (HAWKINS and SHILLING) 1936, 113, 273
 Osmotic adjustments (EISENMAN, HALD, and PETERS) 1937, 118, 289

Blood—continued:

- Oxygen capacity (JOHNSON and HANKE) 1936, 114, 157
 — —, glutathione state, relation (OBERST and WOODS) 1935, 111, 1
 —, uncombined, solubility and physical state (SENDROY, DILLON, and VAN SLYKE) 1934, 105, 597
 Phospholipids, adrenalectomy effect (YEAKEL and BLANCHARD) 1938, 123, 31
 —, as transport mechanism (SINCLAIR) 1936, 115, 211
 —, determination (ELLIS and MAYNARD) 1937, 118, 701
 Phosphorus, organic, phosphatase hydrolysis, effect (KERR and ANTAKI) 1937, 121, 531
 Physicochemical properties, altitude effect (DILL, TALBOTT, and CONSOLAZIO) 1937, 119, xxiii
 — system (DILL, EDWARDS, and CONSOLAZIO) 1937, 118, 635
 — —, altitude effect (DILL, TALBOTT, and CONSOLAZIO) 1937, 118, 649
 Pigment, salt-low ration, reallimentation effect (ORTEN and SMITH) 1934, 105, lxvi
 Pregnancy, gonadotropic hormone preparation (GUSTUS, MEYER, and WOODS) 1936, 114, 59
 Reducing substance, fermentable, zinc-precipitable, diabetes, coma (REINHOLD and LETONOFF) 1936, 114, lxxxiii

Blood—continued:

- Reducing substances, frog and higher animals (WALKER)
1933, 101, 269
- Saccharoids, diet and drugs, relation (SMELO, KERN, and DRABKIN) 1938, 125, 461
- Salt and water, muscle and, exchange (HASTINGS and EICHELBERGER)
1935, 109, xli
(EICHELBERGER)
1937-38, 122, 233
- — —, — and, exchange, body water effect (HASTINGS and EICHELBERGER)
1937, 117, 73
- — —, — and, exchange, dehydration effect (EICHELBERGER and HASTINGS)
1937, 118, 205
- — —, — and, exchange, hydronephrosis effect (EICHELBERGER)
1937, 119, xxx
- — —, — and, exchange, respiratory alkalosis and acidosis, effect (EICHELBERGER and HASTINGS)
1937, 118, 197
- Spectrophotometric technique (DRABKIN and AUSTIN)
1935-36, 112, 105
- Sterol, nature, Liebermann-Burchard reaction (REINHOLD) 1934, 105, lxxi
- Swine, glucose ingestion effect (EVELETH)
1934, 104, 559
(EVELETH and EVELETH)
1935, 111, 753
- Test, benzidine, ascorbic acid effect (KOHN and WATROUS)
1939, 124, 182

Blood—continued:

- Trichinosis, chemistry (PIERCE and HARTMAN)
1938, 123, xciv
- Turtle (VARS)
1934, 105, 135
- , anoxia, effect (JOHLIN and MORELAND)
1933, 103, 107
(MORELAND)
1937, 117, 471
- Vapor pressure determination (CULBERT) 1935, 109, 547
- See also Hematopoietic substance
- Blood cell(s):** (*See note on p. 221*)
- Lipids, microdetermination, gasometric (KIRK, PAGE, and VAN SLYKE)
1934, 106, 203
- Nitrogen, atmospheric, solubility and physical state (VAN SLYKE, DILLON, and MARGARIA)
1934, 105, 571
- Protein, blood plasma and, *in vitro*, distribution (BELLIS and SCOTT)
1935, 111, 17
- Red, count, blood adenine nucleotide relation (BUELL)
1935, 109, xii
- , —, ethyl iodide solubility, blood, correlation (COOL, GAMBLE, and STARR)
1934, 105, 97
- , —, men, healthy (NELSON and STOKER)
1936, 114, lxxvi
- , determination (HEINLE and BING) 1933, 101, 369
- , dissociation constant, apparent (DILL, DALY, and FORRES) 1937, 117, 569

Blood cell(s)—continued:

- Red, electrolytes, blood plasma electrolytes, relation (YANNET, DARROW, and CARY) 1935-36, 112, 477
- , enzyme, carbon dioxide hydration and carbonic acid dehydration, catalytic effect (STADIE and O'BRIEN) 1933, 103, 521
- , form, pregnancy (ROTT-SCHAEFER and BETHELL) 1936, 114, lxxxv
- , lactate-pyruvate oxidation, methylene blue and, effect (WENDEL) 1933, 102, 373
- , lipids, extraction (BOYD) 1936, 115, 37
- , membrane, phosphorus, inorganic, transfer across (HALPERN) 1936, 114, 747
- , oxidation, methylene blue and, methemoglobin and cyanide effect (WENDEL) 1933, 102, 385
- , residue, posthemolytic, basic amino acids (BEACH, ERICKSON, BERNSTEIN, and WILLIAMS) 1938, 123, vi
- , —, —, lipid distribution (ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY) 1937-38, 122, 515
- , —, —, — partition (ERICKSON, WILLIAMS, BERNSTEIN, and JONES) 1936, 114, xxxii
- , —, —, preparation (ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY) 1936, 114, xxxii

Blood cell(s)—continued:

- (BERNSTEIN, JONES, ERICKSON, WILLIAMS, AVRIN, and MACY) 1937-38, 122, 507
- Red, stromata, diamminophosphatide determination (THANNHAUSER and SETZ) 1936, 116, 533
- , volume, determination (EISENMAN, MACKENZIE, and PETERS) 1936, 116, 33
- Salt-low ration, realimentation effect (ORTEN and SMITH) 1934, 105, lxvi
- Volume, determination (ERSENMAN) 1936, 114, xxx
- White, lipids (BOYD) 1933, 101, 623
(BOYD and STEVENSON) 1937, 117, 491
- , polymorphonuclear, proteinase and peptidase activity, pleural exudates (WEISS, KAPLAN, and LARSON) 1938, 125, 247
- See also Reticulocyte*
- Blood plasma:** (*See note on p. 221*)
- Colloids, recovery from work, relation (KEYS and TAYLOR) 1935, 109, 55
- Electrolytes, blood cells, red, electrolytes, relation (YANNET, DARROW, and CARY) 1935-36, 112, 477
- Lipids, age effect (PAGE, KIRK, LEWIS, THOMPSON, and VAN SLYKE) 1935, 111, 613
- , analysis, microoxidation (BOYD) 1933, 101, 323
- , determination, gasometric (KIRK, PAGE, and VAN SLYKE) 1934, 105, xlvii

Blood plasma—continued:

- Lipids, diurnal variations
(BOYD) 1935, 110, 61
—, microdetermination
(STREET) 1936, 116, 25
—, —, gasometric (KIRK,
PAGE, and VAN SLYKE)
1934, 106, 203
- Nitrogen, atmospheric, solu-
bility and physical state
(VAN SLYKE, DILLON, and
MARGARIA)
1934, 105, 571
- Protein binding, phenol red
and diodrast, effect (SMITH
and SMITH)
1938, 124, 107
—, blood cells and, *in vitro*
distribution (BELLIS and
SCOTT) 1935, 111, 17
— solubilities (BUTLER, BLATT,
and SOUTHGATE)
1935, 109, 755
—, total (LEHMAN and SCOTT)
1935, 111, 43
- Proteins, hepatectomy and
laparotomy effect (CHANU-
TIN, HORTENSTINE, COLE,
and LUDEWIG)
1938, 123, 247
—, injection, metabolism,
effect (DAFT, ROBSCHIT-
ROBBINS, and WHIPPLE)
1938, 123, 87
—, nephrectomy, partial, effect
(CHANUTIN and LUDEWIG)
1937, 119, xviii
- Specific gravity and protein,
relation (WEECH, REEVES,
and GOETTSCH)
1936, 113, 167

- Blood platelets:** Blood clotting,
relation (CHARGAFF, BAN-
CROFT, and STANLEY-
BROWN) 1936, 116, 237
- Lipid distribution (ERICKSON,
LEE, and WILLIAMS)
1938, 123, xxxiv
- Blood pressure:** *d*-Alanyl-*l*- and
l-alanyl-*l*-histidine and *l*-
carnosine, comparative
effects (HUNT and DU VI-
GNEAUD) 1938, 124, 699
- d*-Carnosine effect (DU VI-
GNEAUD and HUNT)
1936, 115, 93
- Electrolyte, cisterna magna in-
jection, effect (MASON
RESNIK, and HARRISON)
1935, 109, lix
- Raising principle, adrenal
cortex extract (LOONEY and
DARNELL) 1936, 114, lxii
- Blood serum:** (*See note on p. 221*)
- Acid-base equilibrium, diet
low in inorganic constitu-
ents, effect (SMITH and
SMITH) 1934, 105, lxxxi
—, fatigue effect (MORSE
and SCHLUTZ)
1935, 109, lxix
—, hyperthermia (DANIEL-
SON and STECHER)
1936, 114, xxiii
- Antipneumococcus, globulin
fractions (GREEN)
1938, 123, xlv
- Ashing, dry (WILKINS)
1934, 105, 177
- , thorium nitrate use
(STRAUSS)
1937, 118, 331
- Base, determination (HALD)
1933, 103, 471

Blood serum—continued:

- Base, exercise, dehydration influence (MORSE and SCHLUTZ) 1936, 114, lxxiv
 —, kidney excretion, exercise effect (MORSE and SCHLUTZ) 1937, 119, lxxi
 —, total, and chloride, micro-determination, simultaneous (JOSEPH and STADIE) 1938, 123, lxxv
 —, —, determination (HALD) 1934, 105, 675
 —, —, —, electrodialysis (JOSEPH and STADIE) 1938, 125, 795
 Colloid osmotic pressure determination (KEYS and TAYLOR) 1935, 109, 47
 Dissociation constant, apparent (DILL, DALY, and FORBES) 1937, 117, 569
 —, —, —, Henderson-Hasselbalch equation (ROBINSON, PRICE, and CULLEN) 1934, 106, 7
 Electrolytes (SMITH and SMITH) 1934, 107, 673 (SUNDERMAN) 1936, 113, 111
 —, balance, diet deficient in inorganic constituents, effect (SMITH and SMITH) 1934, 107, 681
 —, exercise effect (MORSE and SCHLUTZ) 1938, 123, lxxxvii
 —, nutritional hypoproteinemia, effect (DARROW and CARY) 1934, 105, 327
 Evaporation rate, vapor pressure, osmotic pressure, and solute concentration

Blood serum—continued:

- measured by (CULBERT, McCUNE, and WEECH) 1937, 119, 589
 Horse, lipase action (FALK and MCGUIRE) 1934, 105, 379
 Lipase action (MCGUIRE and FALK) 1934, 105, 373
 Lipids (WILSON and HANSEN) 1935-36, 112, 457
 —, extraction and saponification (MAN and GILDEA) 1937-38, 122, 77
 —, fat metabolism, intermediary, relation (HANSEN, WILSON, and WILLIAMS) 1936, 114, 209
 —, protein-low diet, effect (PAGE, FARR, and WEECH) 1937, 121, 111
 Lipoid-chlorine (PETERS and MAN) 1934, 107, 23
 Osmotic pressure, colloid, pregnancy (ROTTSCHAEFER and BETHELL) 1936, 114, lxxxv
 Phosphate buffer-phenol red solution, effect (ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN) 1936, 114, lxxxiv
 Phosphatides, precipitation (TURNER) 1934, 105, xciv
 Physicochemical study (ZOZAYA) 1935, 110, 599
 Pregnancy, gonadotropic hormone (BISCHOFF) 1938, 125, 697
 —, gonad-stimulating hormone, preparation and purification (CARTLAND and NELSON) 1937, 119, 59

Blood serum—continued:

- Protein, Bence-Jones (KYDD)
1934, 107, 747
- , blood cholesterol, relation
(SCHWARZ and LICHTENBERG) 1937, 121, 315
- , total (LEHMAN and SCOTT)
1935, 111, 43
- Proteins, amino acids, basic
(BLOCK) 1933, 103, 261
- (BLOCK, DARROW, and
CARY) 1934, 104, 347
- (BLOCK) 1934, 105, 455
- , — —, —, heat effect
(BLOCK) 1934, 104, 343
- , carbamate-carbon dioxide
equilibrium, blood carbon
dioxide transport, relation
(STADIE and O'BRIEN)
1935, 109, lxxxvii
- , edema fluids and, comparison
(GILLIGAN, VOLK, and
ALTSCHULE)
1933, 103, 745
- , solubility precipitation
patterns (PERLZWEIG, KON-
DRITZER, and BRUCH)
1938, 123, xcii
- , various origins, relationship
(BLOCK, DARROW, and
CARY) 1934, 104, 347
- Proteolysis, uremia (MASON
and EVERS)
1937, 119, 735
- Solute molality, specific gravity
and water, relation (SUNDER-
MAN) 1936, 113, 111
- Specific gravity and protein,
relation (WEECH, REEVES,
and GOETTSCH)
1936, 113, 167
- —, water and solute

Blood serum—continued:

- Ultrafiltrates, creatinine isola-
tion (GAEBLER and ABBOTT)
1938, 123, 119
- , picrate precipitate (GAEB-
LER and ABBOTT)
1937, 119, xxxvi
- Volume, measurement (SUN-
DERMAN) 1935, 109, xci
(SUNDERMAN and AUSTIN)
1936, 114, ciii
- Blood sugar:** Adrenals, demed-
ulated, physostigmine effect
(HARNED and COLE)
1938, 123, li
- Carbohydrate ingestion, high
(TALBOTT) 1935, 109, xci
- Cataract from lactose-contain-
ing diet, relation (DAY)
1935, 109, xxvi
- — vitamin G-deficient diet,
relation (DAY)
1935, 109, xxvi
- Decapitation and venesection,
values, comparison (HRU-
BETZ and DOTTI)
1934, 107, 731
- Determination, Benedict
method, color development
study (SUNDERMAN and
RAZEK) 1937, 118, 397
- , — —, light filters, use
(SUNDERMAN and RAZEK)
1936, 114, civ
- , gasometric, Somogyi fil-
trate (VAN SLYKE and
KUGEL) 1933, 102, 51
- , photoelectric (HOFFMAN)
1937, 120, 51
- Dithio acids, substituted, effect
(GREENSTEIN and FRIED-

Blood sugar—continued:

- Fermentable, determination, gasometric (HOLDEN) 1937, 119, 347
- Fowl, fasting, gizzardecotomized (BURROWS, FRITZ, and TITUS) 1935, 110, 39
- Goat (CUTLER) 1934, 106, 653
- Insulin effect (DOTTI and HRUBETZ) 1936, 113, 141
- In vitro* (KLEINER and HALPERN) 1933, 101, 535 (NEUWIRTH) 1934, 104, 129
- Low, diabetes (PAUL and GIBSON) 1938, 123, xci
- Mammal, distribution (SOMOGYI) 1933, 103, 665
- Microtitration method (MILLER and VAN SLYKE) 1936, 114, lxxi, 583
- Pancreatectomy effect (LICHTMAN) 1937, 120, 35
- True, insulin convulsions (DOTTI) 1934, 104, 535
- Body composition:** Diet poor in salts, effect (LIGHT, SMITH, SMITH, and ANDERSON) 1934, 107, 689
- Body fluids:** Epinephrine destruction (KOEHLER) 1934, 105, p. 1
- Halides, distribution, chronic bromide intoxication (MASON) 1936, 113, 61
- Photooxidation (SMETANA) 1938, 124, 667
- Protein (BRUGER) 1934, 105, xiii
- Bombicysterol:** (BERGMANN)

- Bone:** Calcification, rickets, salt solutions, effect (GERSTENBERGER) 1938, 123, xli
- Composition (LOGAN) 1935, 110, 375
- , diet poor in inorganic constituents, effect (BROOKE, SMITH, and SMITH) 1934, 104, 141
- Extract, skeletal growth and bone phosphatase, effect (LANDAUER, UPHAM, and RUBIN) 1935, 108, 121
- Fluoride feeding, effect (SMITH and LANTZ) 1933, 101, 677
- Growth, normal and rachitic rats (RUSSELL, TAYLOR, and DUNCAN) 1937, 119, lxxxv
- Magnesium deprivation effect (ORENT, KRUSE, and MCCOLLUM) 1934, 106, 573
- Marrow, anemia, milk-produced (FITZ-HUGH, ROBSON, and DRABKIN) 1933, 103, 617
- Phosphatase, α -amino acids, effect (BODANSKY) 1936, 114, 273
- , blood organic phosphorus hydrolyzed by, nature (KERR and ANTAKI) 1937, 121, 531
- , bone extract effect (LANDAUER, UPHAM, and RUBIN) 1935, 108, 121
- , fluorine effect (SMITH and LANTZ) 1935-36, 112, 302
- identification, bile acids as aid (BODANSKY)

Bone—continued:

Phosphates, molecular constitution (HODGE, BALE, and LEFEVRE)

1937, 119, xlix

Salt, formation (LOGAN and TAYLOR) 1938, 125, 377

—, — and nature (LOGAN and TAYLOR) 1937, 119, lxiv

—, solubility (LOGAN and TAYLOR) 1937, 119, 293

1938, 125, 377, 391

Sodium (HARRISON)

1937, 120, 457

Water, extracellular and intracellular (IOB and SWANSON) 1937-38, 122, 485

See also Skeleton

Boric acid: Ammonia and bases, microdetermination, use (SOBEL, YUSKA, and COHEN) 1937, 118, 443

Borneolglucuronic acid: Glucuronic acid preparation from (SWARTZ and MILLER)

1933, 103, 651

Boys: Basal metabolism, preformed and total creatinine nitrogen (WANG)

1937, 119, cii

Muscle dystrophy, pseudohypertrophic, mineral metabolism (WANG, KAUCHER, and WING) 1935, 109, xcv

Brain: Carbohydrate metabolism (KERR) 1936, 116, 1

—, narcotics and convulsant drugs, effect (KERR and ANTAKI)

1937-38, 122, 49

— oxidation, normal and diabetic (BAKER, FAZEKAS, and HUMWICH) 1938, 125, 545

Brain—continued:

Cephalins, origin (McCONNELL and SINCLAIR)

1937, 118, 131

Chemical topography (RANDALL) 1938, 123, c

1938, 124, 481

Glycogen, insulin, and epinephrine, effect (KERR, HAMPEL, and GHANTUS)

1937, 119, 405

—, isolation (KERR)

1938, 123, 443

Glycolysis, anaerobic (QUASTEL and WHEATLEY)

1937, 119, lxxx

Lactic acid, insulin and epinephrine, effect (KERR, HAMPEL, and GHANTUS)

1937, 119, 405

— —, origin (KERR and GHANTUS) 1937, 117, 217

Lecithins, origin (McCONNELL and SINCLAIR)

1937, 118, 131

Mammalian, glycogen, free sugar and lactic acid, carbohydrate and insulin effect (KERR and GHANTUS)

1936, 116, 9

—, lactic acid (AVERY, KERR, and GHANTUS)

1935, 110, 637

—, proteins, amino acids (BLOCK) 1937, 119, 765

Oxidations, drug influence (BRAND, BRAND, and HERRMANN) 1934, 105, xiii

Phosphocreatine (KERR)

1935, 110, 625

—, narcotics and convulsant drugs, effect (KERR and ANTAKI) 1937-38, 122, 49

Brain—continued:

Phosphorus, rickets (KERR)
1937-38, 122, 53

Primate, proteins, amino acids,
sex differences (BLOCK)
1937, 121, 411

Proteins, amino acids, age
effect (BLOCK)
1937, 120, 467

—, — —, sex differences
(BLOCK) 1938, 123, xiii

Sugar, free, insulin and
epinephrine, effect (KERR,
HAMPEL, and GHANTUS)
1937, 119, 405

Water and electrolytes, growth
effect (YANNET and DAR-
ROW) 1938, 123, 295

See also Cerebrum

Bran: Crude fiber, feces fatty
acids, volatile, influence
(OLMSTED, CURTIS, and
TIMM) 1935, 108, 645

Pentosan, feces fatty acids,
volatile, influence (OLMSTED,
CURTIS, and TIMM)
1935, 108, 645

Prepared, hemoglobin re-
generation influence (ROSE,
VAHLTEICH, and MacLEOD)
1934, 104, 217

Bromide(s): Biological fluids,
determination (BRODIE and
FRIEDMAN) 1938, 124, 511

Dietary, body bromine, effect
(WINNEK and SMITH)
1937, 119, cvi

Intoxication, chronic, body
fluids, halide distribution
(MASON) 1936, 113, 61

Tissues, determination (BRO-
DIE and FRIEDMAN)
1938, 124, 511

Bromine: Biological substances,
determination (WINNEK and
SMITH) 1937, 119, 93

Body, dietary bromide and
chloride, effect (WINNEK and
SMITH) 1937, 119, cvi

Carbohydrate oxidation
(DUFF, SHEPPARD, and
EVERETT) 1938, 123, xxxii

— —, second stage (SHEPPARD
and EVERETT)

1934, 105, lxxx

-Free medium, synthetic, algæ
growth (McINTYRE and
BURKE) 1937, 119, lxxviii

Glucoside differentiation, ac-
tion (SHEPPARD and EVER-
ETT) 1936, 114, xci

Metabolism (CORLEY, TRIPP,
and NEWTON)

1935, 109, xxiii

Nutrition rôle (WINNEK and
SMITH) 1937, 121, 345

Bromine water: Carbohydrates,
behavior (EVERETT, ED-
WARDS, and SHEPPARD)

1934, 104, 11

Urine, normal, sugar, behavior
(EVERETT, EDWARDS, and
SHEPPARD) 1934, 104, 11

Bromobenzene: Absorption and
detoxication, bile rôle (STE-
KOL and MANN)

1937, 117, 619

p - Bromophenylmercapturic
acid synthesis, relation
(STEKOL) 1937, 118, 155

Cystine utilization, growth
effect (WHITE and JACKSON)
1935, 111, 507

Dietary, glutathione, growth
effect (STEKOL)

1938, 123, cxvi

Bromobenzene—*continued*:

Dietary, growth effect (STEKOL)
1937-38, 122, 55

Methionine utilization, growth
effect (WHITE and JACKSON)
1935, 111, 507

Bromophenylhydrazine: *p*-, de-
rivatives, *d*-galacturonic and
d-mannuronic acids (NIE-
MANN, SCHOEFFEL, and
LINK) 1933, 101, 337

Bromophenylmercapturic acid:
p-, synthesis, body weight,
relation (STEKOL)

1937, 119, xciv
1937, 121, 93

—, —, diet effect (STEKOL)
1937, 117, 147

—, —, fasting rabbit (CON-
WAY) 1937, 121, 27

—, —, food and bromobenzene
relation (STEKOL)
1937, 118, 155

—, urine, determination
(STEKOL) 1936, 113, 279

Bromotriacetylglucuronic acid:
 α -, methyl ester, prepara-
tion (GOEBEL and BABERS)
1935, 111, 347

Bufagin: Marino-, cino-, and
gama-, chemical constitu-
tion (JENSEN)

1937, 119, lii

Buffer(s): Dimethylglycine
(MICHAELIS and SCHUBERT)
1936, 115, 221

Phosphate, -phenol red solu-
tion, blood serum effect
(ROBINSON, PRICE, HOGDEN,
NELSON, and CULLEN)

1936, 114, lxxxiv

Thioglycolic acid oxidation,
metal, dithiol and, effect

Buffer(s)—*continued*:

(KHARASCH, LEGAULT, WIL-
DER, and GERARD)

1936, 113, 537

Urease activity, effect (HOW-
ELL and SUMNER)

1934, 104, 619

Bufo: *See* Toad

Butter: Carotene (BAUMANN and
STEENBOCK)

1933, 101, 547

—, breed and diet, cows,
influence (BAUMANN, STEEN-
BOCK, BEESON, and RUPEL)

1934, 105, 167

Vitamin A (BAUMANN and
STEENBOCK)

1933, 101, 547

—, —, breed and diet, cows,
influence (BAUMANN, STEEN-
BOCK, BEESON, and RUPEL)

1934, 105, 167

Butter fat: Acids, determi-
nation and characterization (HIL-
DITCH and LONGENECKER)

1937-38, 122, 497

Antioxidants (SHREWSBURY
and KRAYBILL)

1933, 101, 701

Arachidonic acid (BOSWORTH
and SISSON)

1934, 107, 489

Carotene (SHREWSBURY and
KRAYBILL) 1933, 101, 701

— determination (BARNETT)
1934, 105, 259

— —, spectrophotometric
(WISEMAN and CARY)

1935, 109, ci

Fatty acids, isolation and
identification (BOSWORTH
and BROWN)

1933, 103, 115

Butter fat—continued:

Fatty acids, saturated, higher
(HELZ and BOSWORTH)

1936, 116, 203

Linoleic acid (ECKSTEIN)

1933, 103, 135

Linolenic acid (ECKSTEIN)

1933, 103, 135

Monohydroxypalmitic acid
(BOSWORTH and HELZ)

1935-36, 112, 489

Vitamin A (SHREWSBURY and
KRAYBILL)

1933, 101, 701

— —, determination (SHINN
and CARY)

1936, 114, xcii

Butyl acids: Iso-, normal series,
configurational relationship
(LEVENE and MARKER)

1935, 111, 299

Butyl alcohol: Acetone-, fermenta-
tion, intermediary com-
pounds (JOHNSON, PETER-
SON, and FRED)

1933, 101, 145

Extracts, cystine and cysteine
determination (HESS and
SULLIVAN)

1935, 108, 195

-Isopropyl alcohol fermenta-
tion (OSBURN, BROWN, and
WERKMAN)

1937, 121, 685

Butyric acid(s): α -Amino- β -hy-
droxy-*n*-, configuration, spa-
tial (MEYER and ROSE)

1936, 115, 721

—, synthesis (CARTER)

1935-36, 112, 769

(WOOD, MADDEN, and CAR-
TER)

1937, 117, 1

Butyric acid(s)—continued:

(WEST and CARTER)

1937, 119, 103, 109

(WEST, KRUMMEL, and CAR-
TER)

1937-38, 122, 605

(WEST and CARTER)

1937-38, 122, 611

Glycogen formation, ingestion
effect (ECKSTEIN)

1933, 102, 591

β -Hydroxy-, acetoacetic acid,
reduction from (STARK and
COHEN)

1938, 123, cxv

dl- α -Hydroxy- γ -methio-, me-
tabolism, cystinuria (BRAND,
BLOCK, and CAHILL)

1937, 119, 681

Metabolism, deuterium as in-
dicator (RITTENBERG,
SCHOENHEIMER, and EVANS)

1937, 120, 503

dl- γ -Methiol- α -hydroxy-, me-
tabolism, cystinuria (BLOCK,
BRAND, and CAHILL)

1937, 119, xii

γ -Thio-, and γ, γ' -dithiodi-, me-
tabolism, cystinuria (BRAND,
BLOCK, and CAHILL)

1937, 119, 689

C

Cabbage: Chinese, calcium avail-
ability (KAO, CONNER, and
SHERMAN)

1938, 123, 221

Iodine determination (MC-
CLENDON, HAMILTON, and
HOLDRIDGE)

1934, 105, lviii

Calciferol: Blood serum calcium,
nephrectomized and thyro-
parathyroidectomized-ne-
phrectomized rat, effect
(TWEEDY, McNAMARA,

Calciferol—continued:

TEMPLETON, and PATRAS)

1937, 119, xcix

Toxicity (HARTMAN)

1937, 119, xlv

Calcification: Cartilage, rachitic,

phosphate and parathyroid

extract effect (MCLEAN and

MCCOY) 1936, 114, lxxv

Protein intake, relation (CON-

NER and SHERMAN)

1936, 115, 695

Rickets, salt solutions, effect

(GERSTENBERGER)

1938, 123, xli

Tooth enamel, variations (HOL-

LANDER, BODECKER, SAPER,

and APPLEBAUM)

1934, 105, xl

Calcified material: Sodium (HAR-

RISON) 1937, 120, 457

Calcium: Aqueous humors

(SALIT) 1934, 104, 275

Biological fluids, determina-

tion, spectrographic (THOM-

SON and LEE)

1937, 118, 711

— material, determination

(WANG) 1935, 111, 443

— —, —, ceric sulfate titra-

tion (LARSON and GREEN-

BERG) 1938, 123, 199

Blood, determination, ceric sul-

fate titration (LARSON and

GREENBERG)

1938, 123, 199

—, partition, chicken (HEL-

LER, PAUL, and THOMPSON)

1934, 106, 357

— phosphate and, relation

(MCLEAN and HINRICHS)

1935, 109, lxiii

Calcium—continued:

Blood plasma, age effect (KIRK,

LEWIS, and THOMPSON)

1935, 111, 641

— — and serum, state (GREEN-

WALD and RUBIN)

1936, 114, xlv

— —, dairy cattle (HAAG and

JONES) 1935, 110, 439

— —, diffusibility, parathor-

mone effect (GILLIGAN,

VOLK, and ALTSCHULE)

1933, 103, 745

— — ultrafiltrates, bicarbonate

ion concentration and hydro-

gen ion concentration, effect

(DILLMAN and VISSCHER)

1933, 103, 791

— serum (SALIT)

1934, 104, 275

— —, age relation (STEARNS

and WARWEG)

1933, 102, 749

— — and edema fluids, con-

centration, comparison (GIL-

LIGAN, VOLK, and ALT-

SCHULE) 1933, 103, 745

— — determination, ceric sul-

fate use (KATZMAN and JA-

COBI) 1937, 118, 539

— —, forms (GREENBERG and

LARSON) 1935, 109, 105

(BENJAMIN) 1935, 109, 123

— —, —, hypercalcemia (BEN-

JAMIN and HESS)

1933, 103, 629

— —, ingested calcium effect

(FREEMAN, KANT, and IVY)

1935-36, 112, 1

— —, nephrectomized and

thyroparathyroidectomized-

nephrectomized rat, calci-

ferol effect (TWEEDY, Mc-

Calcium—continued:

- NAMARA, TEMPLETON, and PATRAS) 1937, 119, xcix
- Blood serum, nutritional hypoproteinemia, effect (DARROW and CARY) 1934, 105, 327
- —, partition, mathematical relations (GREENBERG and LARSON) 1937, 119, xxxix
- Body, calcium and phosphorus intake levels, effect (TOEPFER and SHERMAN) 1936, 115, 685
- fluids, ionization (MCLEAN and HASTINGS) 1935, 108, 285
- —, state (MCLEAN and HASTINGS) 1934, 105, lx
- , food calcium, and phosphorus, relation (WHITCHER, BOOHER, and SHERMAN) 1936, 115, 679
- , — —, effect (LANFORD and SHERMAN) 1938, 123, lxxiii
- Cabbage, Chinese, availability (KAO, CONNER, and SHERMAN) 1938, 123, 221
- Chick (ELVEHJEM and KLINE) 1933, 103, 733
- Deficiency with magnesium deprivation, blood and body effect (DAY, KRUSE, and MCCOLLUM) 1935-36, 112, 337
- Deposits, pathological (MEEKER and KESTEN) 1936, 113, 289
- Determination, microtitration, acidimetric (SOBEL and SKLERSKY) 1937-38, 122, 665

Calcium—continued:

- Determination, potentiometric (TENDELOO) 1936, 113, 333
- (GREENBERG and LARSON) 1936, 115, 769
- Dietary, hematopoiesis effect (DAY, STEIN, and MCCOLLUM) 1938, 123, xxviii
- , magnesium requirement, relation (TUFTS and GREENBERG) 1937-38, 122, 715
- Diffusible, blood serum and transudates *in vivo* (MILLER) 1937-38, 122, 59
- Edema fluids and blood serum, concentration, comparison (GILLIGAN, VOLK, and ALT-SCHULE) 1933, 103, 745
- Electrodes, crystals as (ANDERSON) 1936, 115, 323
- (TENDELOO) 1937, 118, 253
- Filtrable, non-filtrable, blood, chicken, relation (CORRELL and HUGHES) 1933, 103, 511
- Food availability (FINCKE and SHERMAN) 1935, 110, 421
- , body calcium, relation (WHITCHER, BOOHER, and SHERMAN) 1936, 115, 679
- Gestation requirement (COX and IMBODEN) 1934, 105, xviii
- Gossypol and, reaction, physiological significance (GALLUP and REDER) 1935, 109, xxxvi
- Intake levels, body calcium and growth, effect (TOEPFER and SHERMAN) 1936, 115, 685

Calcium—continued:

- Ionized and total, blood serum and ultrafiltrates, relation (MORISON, McLEAN, and JACKSON) 1937-38, 122, 439
- , blood serum and transudates *in vivo* (MILLER) 1937-38, 122, 71
- Lactation requirement (COX and IMBODEN) 1934, 105, xviii
- Low adult rats (CAMPBELL, BESSEY, and SHERMAN) 1935, 110, 703
- diets, calcium and phosphorus metabolism, dairy cows, effect (MEIGS, TURNER, KANE, and SHINN) 1934, 105, lx
- —, rickets and tetany production (SHOHL) 1935, 109, lxxxv
- Metabolism, calcium-low ration, dairy cows, effect (MEIGS, TURNER, KANE, and SHINN) 1934, 105, lx
- Microdetermination (SOBEL, PEARL, and KRAMER) 1936, 114, xcvi
- (SOBEL, PEARL, GERCHICK, and KRAMER) 1937, 118, 47
- Non-diffusible, protein sols (EVERSOLE, FORD, and THOMAS) 1934, 104, 107
- (GREENBERG) 1934, 105, 511
- (EVERSOLE) 1934, 105, 515
- Phosphorus and, intake levels, body calcium and growth, effect (TOEPFFER and SHERMAN) 1936, 115, 685

Calcium—continued:

- Retention, carbon dioxide effect (FORBES) 1934, 107, 283
- , infancy to adolescence (STEARNS) 1934, 105, lxxxiv
- , —, vitamin D effect (STEARNS and JEANS) 1936, 114, c
- Skeleton and tissues, soft, distribution (BESSEY, KING, QUINN, and SHERMAN) 1935, 111, 115
- Storage, skeletal maturity, children, relation (HUNSCHER, HUMMEL, MACY, TODD, and FRANCIS) 1937, 119, lii
- Tissue, thyroparathyroidectomy effect (UNDERHILL and JALESKI) 1933, 101, 11
- Trout, brook, factors affecting (McCAY, TUNISON, CROWELL, and PAUL) 1936, 114, 259
- Urine, excretion (LOGAN) 1935, 109, 481
- Vitreous humors (SALIT) 1934, 104, 275
- Calcium carbonate:** Solubility, calcium protein ionization constants, determination, relation (WEIR and HASTINGS) 1936, 114, 397
- Calcium citrate:** Ionization (HASTINGS, McLEAN, EICHELBERGER, HALL, and DA COSTA) 1934, 107, 351
- Milk, buffer action (WHITTIER) 1938, 123, 283

- Calcium ion:** Concentration, determination, biological (MCLEAN and HASTINGS) 1934, 107, 337
- Calcium phosphate(s):** Colloidal, blood, hypercalcemia, formation (GREENBERG and TUFTS) 1934, 105, xxxii
Milk, buffer action (WHITTIER) 1933, 102, 733
Molecular constitution (HODGE and BALE) 1938, 123, lvii
Precipitates, carbonate-containing, solubility (LOGAN and TAYLOR) 1938, 125, 391
- Calcium proteinate:** Ionization constants, determination (WEIR and HASTINGS) 1936, 114, 397
- Calcium salt(s):** Dissociation (GREENWALD) 1938, 123, xlv
1938, 124, 437
- Calcomine-fast pink:** Blood antithrombin, relation (QUICK) 1937, 119, lxxxi
- Calculi:** Bile, human (RAY) 1935, 111, 689
Cystine (GREEN, MORRIS, CAHILL, and BRAND) 1936, 114, 91
- Calf:** Cod liver oil toxicity (TURNER, MEIGS, and CONVERSE) 1936, 114, civ
Magnesium studies (DUNCAN, HUFFMAN, and ROBINSON) 1935, 108, 35
- Callicrein:** Chemistry (BISCHOFF and ELLIOT) 1937, 117, 7
Purification (BISCHOFF and ELLIOT) 1935, 109, 419
- Canaline:** Dissociation constants, apparent (TOMIYAMA) 1935, 111, 45
-Related compounds (BOREK and CLARKE) 1938, 125, 479
- Canavalin:** Con-, A and B, molecular weight (SUMNER, GRALÉN, and ERIKSSON-QUENSEL) 1938, 125, 45
Jack bean crystalline globulin from trypsin digestion of (SUMNER and HOWELL) 1936, 113, 607
Molecular weight (SUMNER, (GRALÉN, and ERIKSSON-QUENSEL) 1938, 125, 45
- Canavanine:** Dissociation constants, apparent (TOMIYAMA) 1935, 111, 45
-Related compounds (BOREK and CLARKE) 1938, 125, 479
- Cancer:** Tissue, glyoxalase (PLATT and SCHROEDER) 1934, 106, 179
Urine cholesterol (BLOCH and SOBOTKA) 1938, 124, 567
See also Carcinogenesis
- Candy:** Acidified, enamel effect (WEST and JUDY) 1938, 123, cxxv
- Cannizzaro reaction:** Catalytically induced reaction resembling (LEVENE and CHRISTMAN) 1937, 120, 575
- Capillary:** Fragility, Eskimos and whites in Arctic (LEVINE) 1937, 119, lxii
Permeability, proteins (KEYS and TAYLOR) 1935, 109, 55

- Caproic acid:** Glycogen formation, ingestion effect (ECKSTEIN) 1933, 102, 591
- α -Hydroxy-*n*-, α -hydroxyisocaproic acid, configurational relationship (BARTLETT, KUNA, and LEVENE) 1937, 118, 513
- Metabolism, deuterium as indicator (RITTENBERG, SCHOENHEIMER, and EVANS) 1937, 120, 503
- Capsicum annum:** See Pimiento
- Carballylic acid:** α -Aminotri-, dissociation constants, apparent (GREENSTEIN and JOSEPH) 1935, 110, 619
- Glycyl- α -aminotri-, dissociation constants, apparent (GREENSTEIN and JOSEPH) 1935, 110, 619
- Carbamate:** Amino acids and, equilibrium (STADIE and O'BRIEN) 1935-36, 112, 723
- Carbon dioxide equilibrium (STADIE and O'BRIEN) 1935-36, 112, 723
- — —, amino acids, hemoglobin, and blood serum proteins, blood carbon dioxide transport, relation (STADIE and O'BRIEN) 1935, 109, lxxxvii
- Determination, Ferguson-Roughton method (STADIE and O'BRIEN) 1935-36, 112, 723
- Equilibrium (STADIE and O'BRIEN) 1937, 117, 439
- Carbamino compounds:** Carbon dioxide transport, relation (DALY and DILL) 1935, 109, xxv
- Carbinol(s):** Aliphatic, configurationally related, rotatory dispersion (LEVENE and ROTHEN) 1936, 116, 209
- Isopropyl-, configurational relationship (LEVENE and MARKER) 1933, 101, 413
- Methylcyclohexyl-, methylhexyl-, configurational relationship (LEVENE and HARRIS) 1936, 113, 55
- Phenyl-, separation (LEVENE and MARKER) 1933, 103, 373
- Phenylated, hydrogenation (LEVENE) 1936, 115, 275
- Carbobenzoxy derivatives:** Benzyl group splitting (SIFFERD and DU VIGNEAUD) 1935, 108, 753
- Carbohydrate(s):** Absorption, intestine (PIERCE and HAEGE) 1938, 123, xciii
- Blood serum phosphatase, ingestion effect (BODANSKY) 1934, 104, 473
- Brain, mammalian, glycogen, free sugar and lactic acid, insulin and, effect (KERR and GHANTUS) 1936, 116, 9
- , narcotics and convulsant drugs, effect (KERR and ANTAKI) 1937-38, 122, 49
- Bromine, oxidation, second stage (SHEPPARD and EVERETT) 1934, 105, lxxx
- water, behavior (EVERETT, EDWARDS, and SHEPPARD) 1934, 104, 11
- Classification, new (EVERETT and SHEPPARD) 1937, 119, xxxii

Carbohydrate(s)—continued:

- Dietary, feces nitrogen, effect
(MITCHELL) 1934, 105, 537
- Egg albumin, antigenic behavior (FERRY and LEVY)
1934, 105, xxvii
- Hypophysectomy effect
(FISHER, RUSSELL, and CORI) 1936, 115, 627
- Immunological specificity, acetyl group, influence (GOEBEL and BABERS)
1934, 105, xxx
- Ingestion, high, blood sugar and respiratory exchange, effect (TALBOTT)
1935, 109, xci
- Intermediates, glycogenic and ketolytic action, comparison (SHAPIRO) 1935, 108, 373
- Ketonuria, action (DEUEL, HALLMAN, and MURRAY)
1938, 123, xxix
1938, 124, 385
- Metabolism (DOTTI)
1934, 104, 535
- , adrenalectomy effect
(BUELL, ANDERSON, and STRAUSS) 1936, 114, xvi
- , brain (KERR)
1936, 116, 1
(KERR and GHANTUS)
1937, 117, 217
(KERR, HAMPEL, and GHANTUS) 1937, 119, 405
(KERR) 1938, 123, 443
- , copper rôle (KEIL and NELSON) 1934, 106, 343
- , dietary factor (WESSON and MURRELL)
1933, 102, 303

Carbohydrate(s)—continued:

- Metabolism factor, vegetables, boiling effect (WESSON)
1938, 123, cxxv
- , fat-deficient diet (WESSON and MURRELL)
1934, 105, xcix
- , galactosuria (MASON)
1934, 105, lviii
- , goat (CUTLER)
1934, 106, 653
- hormone, anterior pituitary, assay (BERGMAN and TURNER) 1938, 123, 471
- , pancreatectomy (BARKER, CHAMBERS, and DANN)
1937, 118, 177
- , sexual variation (DEUEL, GULICK, GRUNEWALD, and CUTLER) 1934, 104, 519
(GULICK, SAMUELS, and DEUEL) 1934, 105, 29
(GRUNEWALD, CUTLER, and DEUEL) 1934, 105, 35
(BUTTS, CUTLER, and DEUEL) 1934, 105, 45
(DEUEL, HALLMAN, MURRAY, and SAMUELS)
1937, 119, 607
(DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN)
1937, 119, 617
- Muscle, anaerobic, frog, hydrogen ion concentration effect (KERLY and RONZONI)
1933, 103, 161
- Oxidation, brain, normal and diabetic (BAKER, FAZEKAS, and HIMWICH)
1938, 125, 545
- , bromine (DUFF, SHEPPARD, and EVERETT)
1938, 123, xxxii

Carbohydrate(s)—*continued*:

- Proteins, determination (SHEPARD and EVERETT)
1937, 119, lxxxix
- Pseudoglobulin, nature (COGHILL and CREIGHTON)
1938, 123, xxiii
- Storage, liver, undernutrition effect (JOHNSTON and NEWBURGH)
1937, 119, liv
- Tissue, determination (BLATHERWICK, BRADSHAW, EWING, LARSON, and SAWYER)
1935, 111, 537
- Vitamin B synthesis, digestive tract (GUERRANT, DUTCHER, and TOMEY)
1935, 110, 233
- Carboline carbonic acid(s):** 4-, synthesis (JACOBS and CRAIG)
1936, 113, 759
- Carbon:** Metabolism, *Gibberella saubinetii* on glucose (HESSELER and GORTNER)
1937, 119, 193
- Organic compounds, microdetermination, manometric (VAN SLYKE, PAGE, and KIRK)
1933, 102, 635
- Carbon dioxide:** Absorption curve, blood, oxygenation and reduction effect (VAN SLYKE and SENDROY)
1933, 102, 505
- Amino acids and, equilibrium (STADIE and O'BRIEN)
1935-36, 112, 723
- Blood, transport, carbamate-carbon dioxide equilibrium of amino acids, hemoglobin, and blood serum proteins, relation (STADIE and O'BRIEN)

Carbon dioxide—*continued*:

- Calcium retention, effect (FORBES)
1934, 107, 283
- Capacity, blood, arterial, carbon dioxide inhalation effect (HIMWICH, GILDEA, RAKIETEN, and DuBOIS)
1936, 113, 383
- Carbamate-, equilibrium (STADIE and O'BRIEN)
1935-36, 112, 723
- , —, amino acids, hemoglobin, and blood serum proteins, blood carbon dioxide transport, relation (STADIE and O'BRIEN)
1935, 109, lxxxvii
- Hemoglobin combination, carbonic acid dissociation constant, first, relation (MARGARIA and GREEN)
1933, 102, 611
- Hydration, blood cell, red, enzyme from, catalytic effect (STADIE and O'BRIEN)
1933, 103, 521
- Phosphorus retention, effect (FORBES)
1934, 107, 283
- Production, yeast zymine, electrolyte effect (STAVELY, CHRISTENSEN, and FULMER)
1935, 111, 771
- , —, ethanol effect (STAVELY, CHRISTENSEN, and FULMER)
1935, 111, 785
- Sugar-beet hydrogen ion concentration and nitrogen fractions, effect (FIFE and FRAMPTON)
1935, 109, 643
- Tension, intestine (HERRIN)

Carbon dioxide—continued:

Tension, substituted phenols, metabolism effect (KRAHL and CLOWES)

1937, 119, lx

—, urine (SENDROY, SEELIG, and VAN SLYKE)

1934, 106, 479

Transport, carbamino compounds, relation (DALY and DILL)

1935, 109, xxv

Yeast fermentation, determination, apparatus (FRANKE and MOXON)

1934, 105, 415

Carbonic acid(s): 4-Carboline, synthesis (JACOBS and CRAIG)

1936, 113, 759

Dehydration, blood cell, red, enzyme from, catalytic effect (STADIE and O'BRIEN)

1933, 103, 521

Derivatives, tryptophane, growth and kynurenic acid production, relation (BAUGUESS and BERG)

1936, 114, 253

Dissociation constant, first, hemoglobin solutions, hemoglobin and carbon dioxide, relation (MARGARIA and GREEN)

1933, 102, 611

Thermochemistry, rapid (ROUGHTON)

1936, 114, lxxxvi

Carbon monoxide: Absorption, reduced hematin and pyridine hemochromogen (CLIFCORN, MELOCHE, and ELVEHJEM)

1935, 111, 399

Air, determination (CHRISTMAN and BLOCK)

Carbon monoxide—continued:

Blood, determination (CHRISTMAN and RANDALL)

1933, 102, 595

Capacity, hemoglobin (MORRISON and HISEY)

1935, 109, 233

-Combining power, blood hemoglobin, fish, acidity effect (ROOT and GREEN)

1934, 106, 545

Hemocyanin combination (ROOT)

1934, 104, 239

Hemoglobin, union (ADAMS)

1934, 105, iii

Carbon tetrachloride: Liver injury, fat metabolism, effect (WINTER)

1938, 124, 339

Carbonyl compounds: Unsaponifiable material, isolation (ANCHEL and SCHOENHEIMER)

1936, 114, 539

Carboxy acids: Monoamino-mono- and monoaminodi-, *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON)

1937, 121, 507

Carboxycytochrome: C-, spectroscopy (ALTSCHUL and HOGNESS)

1938, 124, 25

Carboxyhemoglobin: Activity coefficient, glycine effect (RICHARDS)

1937-38, 122, 727

Solubility, neutral salts (FERRY, COHN, and NEWMAN)

1936, 114, xxxiv

Carboxylase: Co-, enzyme synthesis (LIPSCHITZ, POTTER, and ELVEHJEM)

1938, 124, 147

System (TAUBER)

1938, 125, 191

Carboxylic acid(s): Aminocyclohexane, polarity (GREENSTEIN and WYMAN)

1938, 123, xlv

Di-, sodium salts, citric acid formation, effect (ORTEN and SMITH) 1937, 119, lxxiv (SMITH and ORTEN)

1938, 124, 43

1, 5 - Diphenylpyrazoline - 3 -, body temperature, environmental temperature effect (SCHULTZ and HILL)

1938, 123, cvi

Disubstituted, symmetrical disubstituted methanes from optically active homologous series (LEVENE and MARKER) 1934, 106, 173

Phenethyl group-containing, maximum rotations (LEVENE and HARRIS)

1935, 111, 725

Phenyl or cyclohexyl group-containing, maximum rotations (LEVENE and MARKER)

1935, 110, 329

Pyrrolidone-, glutamic acid-, system (WILSON and CANNAN) 1937, 119, 309

α -Substituted, normal, rotatory dispersion curves (LEVENE and ROTHEN)

1934, 107, 533

Carboxypeptidase: Specificity (BERGMANN and FRUTON)

1937, 117, 189

Carcinogenesis: (SHEAR)

1936, 114, xc

Anthracene derivatives, effect (SHEAR) 1938, 123, cviii

Chemo-antigens and (FRANKS and CREECH)

Carcinogenesis—continued:

Cholanthrene and methylcholanthrene isomers, effect (SHEAR) 1936, 114, lxxxix

Physiological (HALL and FRANKS) 1938, 123, xlix

See also Cancer

Cardiac: *See* Heart

Cardiovascular disease: Vitamin B₁ relation (SURE and JONES) 1937, 119, xcvi

Carnivora: Kynurenic acid excretion (JACKSON)

1938, 123, lxiii

Carnosine: *d*-, synthesis and blood pressure effect (DU VIGNEAUD and HUNT)

1936, 115, 93

—, — — depressor effect (DU VIGNEAUD and HUNT)

1936, 114, cv

l-, β -*l*-aspartyl-*l*-histidine, precursor (DU VIGNEAUD and HUNT) 1938, 125, 269

—, blood pressure effect (HUNT and DU VIGNEAUD)

1938, 124, 699

—, depressor action, β -alanine radical, relation (HUNT and DU VIGNEAUD)

1938, 123, lxi

—, utilization, histidine-deficient diet (DU VIGNEAUD, SIFFERD, and IRVING)

1937, 117, 589

Muscle, mammalian, determination (ZAPP)

1938, 123, cxxxii

—, skeletal (WOLFF and WILSON) 1935, 109, 565

Synthesis (SIFFERD and DU VIGNEAUD)

Carnosine—continued:

Utilization, diphtheria bacillus
(MUELLER)

1938, 123, 421

Carotene(s): α -, hydrogenation
(SMITH)

1933, 102, 157

—, properties (STRAIN)

1935, 111, 85

Alfalfa hay, vitamin A activ-
ity, relation (HARTMAN,
KANE, and SHINN)

1934, 105, xxxvi

β -, hydrogenation (SMITH)

1933, 102, 157

—, jaundice and choledoch-
colostomy, absorption and
utilization, vitamin A de-
ficiency (GREAVES and
SCHMIDT)

1934, 105, xxxi

—, properties (STRAIN)

1935, 111, 85

Butter (BAUMANN and STEEN-
BOCK)

1933, 101, 547

—, breed and diet, cows, influ-
ence (BAUMANN, STEEN-
BOCK, BEESON, and RUPEL)

1934, 105, 167

— fat (SHREWSBURY and
KRAYBILL)

1933, 101, 701

— —, determination (BAR-
NETT)

1934, 105, 259

— —, —, spectrophotometric
(WISEMAN and CARY)

1935, 109, ci

Colostrum (SEMB, BAUMANN,
and STEENBOCK)

1934, 107, 697

Determination (CLAUSEN and
McCOORD)

1936, 113, 89

—, bixin solutions, use
(HOLMES and BROMUND)

1935-36, 112, 437

Carotene(s)—continued:

Determination, vitamin A po-
tency, relation (SHINN,
KANE, WISEMAN, and CARY)

1937, 119, lxxxix

Dihydro-, ozonization, geronic
acid formation (STRAIN)

1933, 102, 137

Hay and fresh green plants,
determination (WISEMAN,
KANE, and CARY)

1934, 105, ci

— — meal, storage effect
(KANE and SHINN)

1935, 109, xlviii

Leaf (MACKINNEY)

1935, 111, 75

—, properties (MACKINNEY)

1935, 108, 45

Occurrence (STRAIN)

1935, 111, 85

Ozonization, geronic acid
formation (STRAIN)

1933, 102, 137

Plant, determination (WISE-
MAN and KANE)

1936, 114, cviii

—, properties (SMITH and
MILNER)

1934, 104, 437

-Related compounds, ozoniza-
tion, geronic acid formation
(STRAIN)

1933, 102, 137

Roots, properties (MACKIN-
NEY)

1935, 108, 45

Separation, adsorption
(STRAIN)

1934, 105, 523

Solutions, stability (BAUMANN
and STEENBOCK)

1933, 101, 561

Stability, fatty acids, ethyl
esters, liver, and vegetable
oils (McDONALD)

1933, 103, 455

Carotene(s)—*continued*:

- Stability, olive oil (TURNER)
1934, 105, 443
- Synthesis, microorganisms
(BAUMANN, STEENBOCK, IN-
GRAHAM, and FRED)
1933, 103, 339
- Utilization, fetus, human
(CLAUSEN and McCOORD)
1937, 119, xviii

Carotenoid(s): Acids, effect
(QUACKENBUSH, STEEN-
BOCK, and PETERSON)

- 1938, 123, xcvi
- Fruit, light effect (SMITH and
MORGAN) 1933, 101, 43
- Pigments, absorption spectra,
liquid air temperatures (HIL-
BERT and JANSEN)

1934, 106, 97

- , cow-pea leaves, absorption
spectra, liquid air tempera-
tures (HILBERT and JANSEN)
1934, 106, 97

- Protein pigment, lobster egg
(STERN and SALOMON)
1937-38, 122, 461

- Retina, chicken (WALD and
ZUSSMAN)

1937-38, 122, 449

Cartilage: Composition (LO-
GAN) 1935, 110, 375

- Epiphyseal, reaction, normal
and rachitic rats (PIERCE)
1938, 124, 115

- Rachitic, calcification, phos-
phate and parathyroid ex-
tract effect (McLEAN and
McCoy) 1936, 114, lxv

- Water, extracellular and in-
tracellular (IOB and SWAN-
SON) 1937-38, 122, 485

Casein: Amino acids, basic
(VICKERY and WHITE)

1933, 103, 413

- Antirachitic property (HAR-
RIS and BUNKER)

1937, 119, xlv

- Arsanilic acid and (BOYD and
HOOKER) 1934, 104, 329

- Cystine, alkali effect (JONES
and GERSDORFF)

1934, 104, 99

- determination, colorimetric
(JONES and GERSDORFF)

1933, 101, 657

- liberation rate, hydrolysis
(JONES and GERSDORFF)

1933, 101, 657

- — —, tryptic digestion
(JONES and GERSDORFF)

1936, 114, lii

- Deaminized, anemia produc-
tion (HOGAN and RITCHIE)

1934, 107, 179

- (HOGAN and GUERRANT)

1936, 114, li

- (HOGAN, GUERRANT, and
RITCHIE) 1936, 115, 659

- , cystine (WHITE)

1933, 103, 295

- , nutrition (HOGAN and
RITCHIE)

1934, 105, xxxix

- Decystinized (JONES and
GERSDORFF)

1938, 123, lxiv

- Dipeptide phosphoric acid
from (LEVENE and HILL)

1933, 101, 711

- Erepsin digestion, vitamin B
deficiency influence (SURE,
KIK, and BUCHANAN)

1935, 108, 19

Subjects

Casein—*continued*:

- Flavin-deficient diets, cataract, effect (DAY and DARBY) 1937, 119, xxii
- Fractions, amino acid inadequacy, supplement (CALDWELL and ROSE) 1934, 107, 45
- Lysine, dry heat and alkali effect (BLOCK, JONES, and GERSDORFF) 1934, 105, 667
- Metabolism, cystinuria (BRAND, BLOCK, KASSELL, and CAHILL) 1937, 119, 669
- Organ and tissue protein formation rate, refeeding effect (ADDIS, POO, and LEW) 1936, 116, 343
- Peptic digestion (JONES and GERSDORFF) 1934, 105, xlii
1934, 106, 707
- Sulfur distribution (KASSELL and BRAND) 1938, 125, 435
- Trypsin digestion, vitamin B deficiency influence (SURE, KIK, and BUCHANAN) 1935, 108, 19
- effect (TAUBER and KLEINER) 1934, 104, 271
- Tryptophane determination (SULLIVAN, MILONE, and EVERITT) 1938, 125, 471
- Castration: Diacetic acid metabolism, with and without theelin, effect (GRUNEWALD, CUTLER, and DEUEL) 1934, 105, 35**
- Ketone body excretion, effect (CHAMBERLIN, FURGASON, and HALL) 1937, 121, 599

Castration—*continued*:

- Theelol sensitivity, female rats (CURTIS, MILLER, and WITT) 1937, 119, xxi
- Catabolism: Amino acids (LEIGHTY and CORLEY) 1937, 120, 331 (SNYDER and CORLEY) 1937-38, 122, 491**
- —, branched chain (CORLEY and SNYDER) 1937, 119, xx
- —, phlorhizin effect (CORLEY and LEIGHTY) 1936, 114, xxii
- Purine nucleotides (ETLER and ALLEN) 1938, 123, 655
- Catalase(s): (MARKS) 1934, 107, 623**
- Absorption spectrum (STERN) 1937, 121, 561
- Crystalline (SUMNER and DOUNCE) 1937, 121, 417
- , molecular weight (SUMNER and GRALÉN) 1938, 125, 33
- Inactivation (ROSENBLUM) 1935, 109, 635
- , glutathione effect (MARKS) 1936, 115, 299
- Liver (DUNN and MORGULIS) 1937, 118, 545
- Marine animals, inactivation by oxygen (MARKS) 1934, 105, 489
- Monoethyl hydrogen peroxide decomposition (STERN) 1936, 114, 473
- Mussel, oxygen, inactivation (MARKS and FOX) 1933, 103, 269
- Prosthetic group (STERN) 1935-36, 112, 661

Catalase(s)—continued:

Ultracentrifugal study (STERN and WYCKOFF)

1938, 124, 573

Catalyst-substrate: Compounds, chemical reactions, method for recording (STERN and DUBOIS) 1936, 116, 575

Catalytic reaction: (LEVENE and CHRISTMAN) 1937, 120, 575

Cataract: Flavin-deficient diets, casein effect (DAY and DARBY) 1937, 119, xxii

Galactose-producing action, protein effect (MITCHELL and COOK)

1938, 123, lxxxvi

Nutritional (MITCHELL and DODGE) 1934, 105, lxi

Production, lactose-containing diet, blood sugar, relation (DAY) 1935, 109, xxvi

—, vitamin G-deficient diet, blood sugar, relation (DAY) 1935, 109, xxvi

Catechol: Oxidation product, tyrosinase relation (WAGREICH and NELSON)

1936, 115, 459

Cathode ray: Vitamin D formation, effect (HOFFMAN and DANIELS) 1936, 115, 119

Cations: Ovalbumin isoelectric point, effect (SMITH)

1936, 113, 473

Cell: Division, stimulants and depressants, oxidative, action (CLOWES and KRAHL)

1935, 109, xxi

Respiration, reversible dyes, catalysis, mechanism (DE-

Cell—continued:

MEIO, KISSIN, and BARRON) 1934, 107, 579

Substances, dyes, reactions (KELLEY and MILLER)

1935, 110, 113, 119

(KELLEY) 1935, 110, 141

Swelling, normal and tumor, *in vitro*, protein effect (SHEAR) 1934, 105, lxxix

Cellobiose: Acetyl derivatives, uronic acid methyl esters, molecular rotations, relationship (GOEBEL and REEVES) 1938, 123, xlii

p-Aminophenol β -glycosides, synthesis (BABERS and GOEBEL) 1934, 105, 473

Fermentation, colon and aerogenes bacteria (POE and KLEMME) 1935, 109, 43

Reactions, new (BERGMANN and GRAFE) 1935, 110, 173

Cellulose: Enzyme adsorption, effect (TAUBER)

1936, 113, 753

Feces, determination (WILLIAMS and OLMSTED)

1935, 108, 653

Cephalin(s): Blood plasma and red blood cells, adults (KIRK) 1938, 123, 637

— —, red blood cells, and tissues, microdetermination (KIRK) 1938, 123, 623

Brain, origin (McCONNELL and SINCLAIR) 1937, 118, 131

Electrometric titration (JUKES) 1934, 107, 783

Lecithin-, fraction, milk, fatty acids (KURTZ, JAMIESON, and HOLM) 1934, 106, 717

Cephalin(s)—*continued*:

Phospholipids, choline estimation, determination (WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY)

1938, 123, 111

Yeast (SALISBURY and ANDERSON) 1935-36, 112, 541

Cereal: Low phosphorus diet, vitamin D₂ response (SCHNEIDER and STEENBOCK) 1938, 123, cv

Cerebronic acid: (LEVENE and HEYMANN)

1933, 102, 1

(LEVENE and YANG)

1933, 102, 541

(KLENK) 1934, 105, 467

Chemical constitution, *dl*- α -hydroxystearic acid oxidation, relationship (KLENK and DITT) 1935, 111, 749
(LEVENE and YANG)

1935, 111, 751

Fraction (TAYLOR and LEVENE) 1933, 102, 535

Cerebrosidase: Nature (THANNHAUSER and REICHEL)

1936, 113, 311

Polydiaminophosphatide hydrolysis by polydiaminophosphatase, relation (THANNHAUSER and REICHEL)

1936, 113, 311

Cerebroside(s): Blood plasma and red blood cells, adults (KIRK) 1938, 123, 637

—, red blood cells, and tissues, microdetermination (KIRK) 1938, 123, 623

Determination, titrimetric (KIRK) 1938, 123, 613

Cerebroside sulfuric acids: Synthetic, blood clotting, effect (CHARGAFF)

1937, 121, 187

Cerebrospinal fluid: Aqueous humor, lymph, and blood, comparison (WALKER)

1933, 101, 269

Chlorides, microdetermination, dichlorofluorescein (SAIFER and KORNBLUM)

1935-36, 112, 117

Fructose (HUBBARD and RUSSELL) 1937, 119, 647

Inorganic phosphate, frog and higher animals (WALKER)

1933, 101, 269

Lead (RABINOWITCH, DINGWALL, and MACKAY)

1933, 103, 725

—, detection, spectrographic (RABINOWITCH, DINGWALL, and MACKAY)

1933, 103, 707

—, determination (RABINOWITCH, DINGWALL, and MACKAY) 1933, 103, 707

Reducing substances, frog and higher animals (WALKER)

1933, 101, 269

Urea, frog and higher animals (WALKER)

1933, 101, 269

Uric acid, frog and higher animals (WALKER)

1933, 101, 269

Cerebrum: Cortex metabolism, pyocyanine effect (YOUNG)

1937, 120, 659

See also Brain

Cerevisterol: Composition and properties (HONEYWELL and BILLS) 1933, 103, 515

Cerevisterol—continued:

Sterol relation (HONEYWELL and BILLS)

1933, 103, 515

Ceric sulfate: Blood serum, calcium determination, use (KATZMAN and JACOBI)

1937, 118, 539

Calcium determination, titration (LARSON and GREENBERG)

1938, 123, 199

Cetyl alcohol: Animal organism, significance (SCHOENHEIMER)

1934, 105, lxxvi

Occurrence and secretion mechanism, animal organism (SCHOENHEIMER and HILGETAG)

1934, 105, 73

Cevine: Degradation (JACOBS and CRAIG)

1937, 119, 141

1938, 124, 659

— products, basic (JACOBS and CRAIG)

1937, 120, 447

Cevine methiodide: Degradation (JACOBS and CRAIG)

1938, 125, 625

Ch'an su: (JENSEN and EVANS)

1934, 104, 307

Chemical constitution: Physiological response, relationship (QUICK)

1933, 101, 475

Chemical reactions: Apparatus for recording (STERN and DuBois)

1936, 116, 575

Kinetics, spectroscopy (STERN and DuBois)

1937, 121, 573

Cherry: Cuticle, wax-like constituents (MARKLEY and SANDO)

1937, 119, 641

Chick: Antidermatitis factors (FOOTS, LEPKOVSKY, HEL-

Chick—continued:

MER, and JUKES)

1937, 119, xxxiv

(WOOLLEY, WAISMAN, MICKELSEN, and ELVEHJEM)

1938, 125, 715

Anti-gizzard erosion factor, chondroitin effect (BIRD and OLESON)

1938, 123, xi

Antiparalytic factor (JUKES and BABCOCK)

1938, 125, 169

— vitamin (JUKES and BABCOCK)

1938, 123, lxxv

Arginine, dietary essential (KLOSE, STOKSTAD, and ALMQUIST)

1938, 123, 691

Calcium studies (ELVEHJEM and KLINE)

1933, 103, 733

Dermatitis, dietary, feeding-stuff filtrate factor distribution (JUKES and LEPKOVSKY)

1936, 114, 117

—, —, filtrate factor relation and properties (LEPKOVSKY and JUKES)

1936, 114, 109, lxi

—, nicotinic acid inactivity (MICKELSEN, WAISMAN, and ELVEHJEM)

1938, 124, 313

Disease, hemorrhagic, diet relation (ALMQUIST and STOKSTAD)

1935, 111, 105

Embryo, copper metabolism (McFARLANE and MILNE)

1934, 107, 309

— extract, dipeptidase (PALMER and LEVY)

1938, 123, xc

Chick—*continued*:

Embryo, iron metabolism (McFARLANE and MILNE)

1934, 107, 309

—, reproductive system, sex hormones, effect (WILLIER, GALLAGHER, and KOCH)

1935, 109, xcix

Encephalomalacia, nutritional, soy bean oil non-saponifiable matter, action (GOETTSCH and PAPPENHEIMER)

1936, 114, xl

—, —, vegetable oils, effect (GOETTSCH and PAPPENHEIMER)

1936, 114, 673

Gizzard factor, distribution and properties (BIRD, ELVEHJEM, and HART)

1936, 114, x

Growth factor, arginine relation (ARNOLD, KLINE, ELVEHJEM, and HART)

1936, 116, 699

— —, new (STOKSTAD and MANNING)

1938, 125, 687

Growth-promoting factor (JUKES and BABCOCK)

1938, 125, 169

Nutritional factors, new (KEENAN, KLINE, ELVEHJEM, HART, and HALPIN)

1933, 103, 671

Phosphorus studies (ELVEHJEM and KLINE)

1933, 103, 733

Vitamin G requirements (LEPKOVSKY and JUKES)

1935, 111, 119

See also Bird, Chicken, Fowl, Hen

Chicken: Antirachitic factor, fate (RUSSELL, TAYLOR, and WILCOX)

1934, 105, lxxiv

1934, 107, 735

Blood calcium and phosphorus, partition (HELLER, PAUL, and THOMPSON)

1934, 106, 357

— hemoglobin (HOLMES, PRIGOTT, and CAMPBELL)

1933, 103, 657

1934, 105, xli

— — determination (SCHULTZE and ELVEHJEM)

1934, 105, 253

Ergosterol, activated, action (BILLS, MASSENGALE, McDONALD, and WIRICK)

1935, 108, 323

Retina, carotenoids (WALD and ZUSSMAN)

1937-38, 122, 449

See also Bird, Chick, Fowl, Hen

Childhood: Creatine and creatinine metabolism (CATHERWOOD and STEARNS)

1936, 114, xviii

Children: Anemias, blood cell and plasma, lipid and mineral distribution (ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY)

1935, 109, xxx

—, — lipid and mineral distribution (ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY)

1937, 118, 569

Blood lipid and mineral distribution (ERICKSON, WILLIAMS, HUMMEL, and MACY)

1937, 118, 15

Calcium storage and skeletal maturity, relation (HUN-

Children—continued:

SCHER, HUMMEL, MACY,
TODD, and FRANCIS)

1937, 119, lii

Dental caries, metabolism
(BOYD, DRAIN, and
STEARNS) 1933, 103, 327

Nephrotic, mineral metabolism
(WANG, KAUCHER, and
WING) 1935, 109, xcv

Urine copper (ROSS and RAB-
INOWITCH)

1935, 111, 803

Chin-shih-hu: Alkaloid (CHEN
and CHEN)

1935, 111, 653

Chloramine-T: Sodium hypo-
chlorite, azochloramid, and,
organic substrates, compara-
tive action (GUITERAS and
SCHMELKES)

1934, 107, 235

Chloride(s): Biological fluids,
determination (EXTON and
ROSE) 1938, 123, xxxv

— —, microdetermination,
colorimetric, silver iodate
(SENDROY)

1937, 120, 419

— —, —, gasometric, silver
iodate (SENDROY)

1937, 120, 335

— —, —, titrimetric, silver
iodate (SENDROY)

1937, 120, 405

— materials, determination
(COLLIER) 1936, 115, 239

— —, microdetermination
(KEYS) 1937, 119, 389

Blood and blood plasma, de-
termination, dry ashing
method (WILKINS and
JONES) 1937, 117, 481

Chloride(s)—continued:

Blood filtrates, microdetermina-
tion, diphenylamine blue
(SAIFER and KORNBLUM)

1936, 114, 551

— plasma, sodium and potas-
sium intake effect (POWER,
WILDER, and CUTLER)

1938, 123, xciv

— serum, determination, gas-
ometric (SENDROY)

1935, 109, lxxxii

— —, exercise, dehydration
influence (MORSE and
SCHLUTZ) 1936, 114, lxxiv

— —, kidney excretion, exer-
cise effect (MORSE and
SCHLUTZ) 1937, 119, lxxi

— —, microdetermination,
dichlorofluorescein (SAIFER
and KORNBLUM)

1935-36, 112, 117

— —, total base and, micro-
determination, simultaneous
(JOSEPH and STADIE)

1938, 123, lxxv

1938, 125, 795

Cerebrospinal fluid, microde-
termination, dichlorofluores-
cein (SAIFER and KORN-
BLUM) 1935-36, 112, 117

Dietary, body bromine, effect
(WINNEK and SMITH)

1937, 119, cvi

Glucose-, relationship, blood,
insulin effect (CHAIKELIS)

1934, 105, 767

Neutral, gastric juice hydro-
chloric acid, relation (HOL-
LANDER) 1938, 125, 161

Tissue, determination (SUN-
DERMAN and WILLIAMS)

1933, 102, 279

Chloride(s)—*continued*:

Urine, albuminous, analysis,
errors (SENDROY)

1937, 120, 441

—, determination, gasometric
(SENDROY)

1935, 109, lxxxix

—, glomerulus, frog and *Nec-
turus* (WESTFALL, FINDLEY,
and RICHARDS)

1934, 107, 661

—, microdetermination, di-
phenylamine blue (SAIFER
and KORNBLUM)

1936, 114, 551

—, sodium and potassium in-
take effect (POWER, WILDER,
and CUTLER)

1938, 123, xciv

Chlorine: Lipid, blood and tis-
sues (CHRISTENSEN and
CORLEY) 1938, 123, 129

Lipoid-, blood serum (PETERS
and MAN) 1934, 107, 23

Chloroform: Liver injury, func-
tion, hemoglobin produc-
tion, nitrogen metabolism,
anemia, relation (DAFT,
ROBSCHT-ROBBINS, and
WHIPPLE) 1936, 113, 391

Chlorotriacetylglucuronic acid:
 α -, methyl ester, preparation
(GOEBEL and BABERS)

1935, 111, 347

1-, methyl ester, synthesis
(GOEBEL and BABERS)

1934, 106, 63

Cholane: 3(α)-Hydroxyetio-, -17-
one, urine, adrenal tumor,
isolation (BUTLER and MAR-
RIAN) 1938, 124, 237

Cholanthrene: Isomers, carcino-
genesis effect (SHEAR)

1936, 114, lxxxix

Methyl-, isomers, carcinogene-
sis effect (SHEAR)

1936, 114, lxxxix

Choledochocolostomy: β -Car-
otene absorption and utiliza-
tion, vitamin A deficiency
(GREAVES and SCHMIDT)

1934, 105, xxxi

Cholestenone: Preparation
(SCHOENHEIMER)

1935, 110, 461

Cholesterilene: Chemical activa-
tion (ECK and THOMAS)

1937, 119, 631

Preparation (MÜLLER and
PAGE) 1933, 101, 127

Cholesterol: Allo- (SCHOEN-
HEIMER and EVANS)

1936, 114, 567

—, absorption (SCHOEN-
HEIMER, DAM, and VON
GOTTBERG) 1935, 110, 667

—, body, absence (SCHOEN-
HEIMER, DAM, and VON
GOTTBERG)

1935, 110, 659

(EVANS) 1936, 115, 449

β - (EVANS and SCHOENHEIMER)
1936, 115, 17

Blood, cholesterol injection,
intravenous, effect (FITZ and
BRUGER) 1936, 114, xxxv

—, determination, Lieber-
mann-Burchard reaction,
color development study
(SUNDERMAN and RAZEK)

1937, 118, 397

—, —, light filters, use (SUND-
ERMAN and RAZEK)

1936, 114, civ

Cholesterol—continued:

- Blood, extraction (HOLMES and CULLEN) 1938, 123, lx
- , fractionation (DREKTER, SOBEL, and NATELSON) 1936, 115, 391
- , fractions, dextrose ingestion effect (SPERRY) 1936, 116, 65
- , hemoglobin and serum protein, relation (SCHWARZ and LICHTENBERG) 1937, 121, 315
- plasma, esterification, bile effect (RIEGEL, RAVDIN, and ROSE) 1937, 120, 523
- —, hepatectomy, partial, and bile duct ligation, effect (CHANUTIN and LUDEWIG) 1936, 115, 1
- —, normal and nephrectomized rats (LUDEWIG) 1938, 123, lxxviii
- —, urea and water ingestion, effect (BRUGER and POINDEXTER) 1933, 101, 21
- serum and plasma, heparinized and oxalated, comparison (SPERRY and SCHOENHEIMER) 1935, 110, 655
- —, determination (MAN and PETERS) 1933, 101, 685
- —, esterification, tissue extracts, effect (SPERRY) 1936, 113, 599
- —, extraction (DREKTER, BERNHARD, and LEOPOLD) 1935, 110, 541
- —, jaundice (BODANSKY and JAFFE) 1935, 109, x

Cholesterol—continued:

- Blood serum, precipitation (TURNER) 1934, 105, xciv
- , ultraviolet light irradiation, effect (KNUDSON, STURGES, and BRYAN) 1938, 123, lxx
- , various blood vessels (SHILITO, BIDWELL, and TURNER) 1935-36, 112, 551
- Body fluids, pathological, state (BRUGER) 1934, 105, xiii
- —, —, total protein, relation (BRUGER) 1934, 105, xiii
- Chemical activation (ECK, THOMAS, and YODER) 1937, 117, 655
- (ECK and THOMAS) 1937, 119, 621, 631
- treatment, effect (MILLER, ZSCHEILE, KOCH, HOGNESS, and KOCH) 1935, 109, lxv
- Derivatives, chemical activation (ECK, THOMAS, and YODER) 1937, 117, 655
- Determination (SPERRY) 1937, 118, 377
- Diets, high and low, tissue cholesterol, effect (SPERRY and STOYANOFF) 1934, 105, lxxxii
- Epiallo- (SCHOENHEIMER and EVANS) 1936, 114, 567
- Esterase, blood (SPERRY and SCHOENHEIMER) 1935, 109, lxxxvi
- (SPERRY) 1935, 111, 467
- Feces (SCHOENHEIMER) 1934, 105, 355

Cholesterol—continued:

- Fed rats, liver lipids, under-nutrition and vitamin deficiency, effect (OKEY and GILLUM) 1935, 109, lxxii
- Floridin activation, nature (YODER) 1936, 116, 71
- Formation, deuterium as indicator (RITTENBERG and SCHOENHEIMER) 1937, 121, 235
- Fractions, blood, dextrose ingestion effect (FITZ and BRUGER) 1936, 113, 297
- Free and combined, bile, determination (RIEGEL and ROSE) 1936, 113, 117
- — —, determination, colorimetric (SMITH and MARBLE) 1937, 117, 673
- — —, microdetermination (SCHOENHEIMER and SPERRY) 1934, 106, 745
- — total, blood serum, human, relation (SPERRY) 1936, 114, 125, xcvi
- , blood, determination (DREKTER, SOBEL, and NATELSON) 1936, 114, xxviii
- , determination (SOBEL, DREKTER, and NATELSON) 1936, 114, xcvi
- , —, colorimetric (FITZ) 1935, 109, 523
- Heat-treated, provitamin D (HATHAWAY and LOBB) 1936, 113, 105
- , — — potency and properties, relation (HATHAWAY and KOCH) 1935, 108, 773

Cholesterol—continued:

- Irradiated, antirachitic efficacy (WADDELL) 1934, 105, 711
- Isomers (EVANS) 1936, 114, xxxiii
- Lipids, tissue, ingestion effect (CHANUTIN and LUDEWIG) 1933, 102, 57
- Lithocholic acid preparation from (SCHOENHEIMER and BERLINER) 1936, 115, 19
- Liver fat, effect (BEST and RIDOUT) 1936, 114, ix
- , yeast-containing diets, nephrectomy, effect (HORTENSTINE, CHANUTIN, and LUDEWIG) 1938, 125, 455
- Microdetermination (SOBEL, DREKTER, and NATELSON) 1936, 115, 381
- Milk (ANSBACHER and SUPPLEE) 1934, 105, 391
- Muscle (BLOOR and SNIDER) 1935, 109, ix
- (BLOOR) 1936, 114, 639
- activity, effect (BLOOR) 1937, 119, 451
- dystrophy, content (WILDER) 1937, 119, civ
- Protein complex, body fluids, pathological (BRUGER) 1935, 108, 463
- Skin, ultraviolet light irradiation, effect (KNUDSON, STURGES, and BRYAN) 1938, 123, lxx
- Solubility, bile salt solutions (BASHOUR and BAUMAN) 1937, 121, 1

Cholesterol—continued:

Synthesis and destruction, animal organism (SCHOENHEIMER and BREUSCH)

1933, 103, 439

—, biological, deuterium use (RITTENBERG)

1937, 119, lxxxiii

Tissue, animal, deposition (OKEY, GILLUM, and YOKELA) 1934, 107, 207

—, high and low cholesterol diets, effect (SPERRY and STOYANOFF)

1934, 105, lxxxii

—, paratyphoid infection effect (SPERRY and STOYANOFF)

1934, 105, lxxxii

—, pregnancy and lactation, effect (OKEY, GODFREY, and GILLUM) 1938, 124, 489

Total and free, blood serum, human, relation (SPERRY)

1936, 114, 125, xcvi

—, blood serum (SPERRY)

1937, 117, 391

—, determination, colorimetric (FITZ)

1935, 109, 523

Triacetyl-*D*-galacturonide, methyl ester, synthesis (SELL and LINK)

1938, 125, 235

Tumor tissue, ultraviolet light irradiation, effect (KNUDSON, STURGES, and BRYAN)

1938, 123, lxx

Urine, cancer (BLOCH and SOBOTKA) 1938, 124, 567

Cholesterol digitonide: Precipitation, bile salts, effect (BASHOUR and BAUMAN)

1937, 117, 551

Cholesterol ester(s): Blood serum, enzyme synthesis and hydrolysis (SPERRY and STOYANOFF)

1938, 123, cxiii

— — — and hydrolysis, bile salts, effect (SPERRY and STOYANOFF)

1937, 119, xciii

1937, 121, 101

— — — and hydrolysis, sodium glycocholate influence (SPERRY and STOYANOFF)

1937, 117, 525

Cholesteryl ethers: Aliphatic, preparation (MÜLLER and PAGE)

1933, 101, 127

Cholic acid: Cystine and methionine deficiency relation (WHITE)

1935-36, 112, 503

Glycodesoxy-, synthesis (CORTESE and BAUMAN)

1936, 113, 779

Litho-, preparation from cholesterol (SCHOENHEIMER and BERLINER)

1936, 115, 19

Choline: Aryl ethers, physiological activity (RENSHAW and ARMSTRONG)

1933, 103, 187

Blood and liver, lipid metabolism, depancreatized dog, insulin and, effect (KAPLAN and CHAIKOFF)

1937, 120, 647

Determination, phospholipid cephalin determination by (WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY)

1938, 123, 111

Choline—*continued*:

- Esterase, muscle, activity, prostigmine effect (STADIE and JONES) 1938, 123, cxiv
 —, nerve impulses, relation (GLICK) 1938, 123, xlii
 —, specificity (GLICK) 1938, 125, 729
 Ethanolamine and, separation (CHARGAFF) 1937, 118, 417
 Ketonuria, effect (DEUEL, MURRAY, HALLMAN, and TYLER) 1937, 120, 277
 Liver fat, effect (BEST and RIDOUT) 1936, 114, ix
 Oxidase (BERNHEIM and WEBSTER) 1937, 119, xi
 Raman spectrum (EDSALL) 1938, 123, xxxiii
Choline sulfate: Cyclic, *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1937-38, 122, 213
Chondroitin: Anti-gizzard erosion factor, chick, effect (BIRD and OLESON) 1938, 123, xi
Chondroitinsulfuric acid: Preparation (MEYER and SMYTH) 1937, 119, 507
 Protein complexes (MEYER, PALMER, and SMYTH) 1937, 119, 501
Chromoproteins: Bacteria, photo-synthetic (FRENCH) 1938, 123, xxxviii
Chrysalis oil: Fatty acids (BERGMANN) 1936, 114, 27
Chrysanthemin: Maize, purple-husked (SANDO, MILNER, and SHERMAN) 1935, 109, 203

- Chymotrypsin**: (BERGMANN and FRUTON) 1938, 124, 321
 Substrates, synthetic (BERGMANN and FRUTON) 1937, 118, 405
Cinobufagin: Chemical constitution (JENSEN) 1937, 119, lii
Cirrhosis: Liver preparation, effect (FORBES) 1938, 123, xxxvii
Citric acid: Biological material, microdetermination (PUCHER, SHERMAN, and VICKERY) 1936, 113, 235
 Decomposition by *Bacillus aertrycke* (BRUCE) 1934, 107, 119
 Determination (SHERMAN, MENDEL, and SMITH) 1935, 109, lxxxiii
 Endogenous, precursors (ORTEN and SMITH) 1936, 114, lxxviii
 1937, 117, 555
 Formation, dicarboxylic acids, sodium salts, injection effect (ORTEN and SMITH) 1937, 119, lxxiv
 (SMITH and ORTEN) 1938, 124, 43
 Iso-, synthesis, citric acid (GREENSTEIN) 1936, 114, xliii
 Metabolism (KUYPER and MATTILL) 1933, 103, 51
 (SHERMAN, MENDEL, and SMITH) 1935, 109, lxxxiii
 —, oral administration effect (SHERMAN, MENDEL, and SMITH) 1936, 113, 265

Citric acid—continued:

Origin, animal metabolism
(SHERMAN, MENDEL, and
SMITH) 1936, 113, 247

Precipitation, quantitative
(KUYPER) 1938, 123, 405

Citrulline: *dl*-, synthesis (KURTZ)
1937-38, 122, 477

Preparation, arginine hydrolysis
(FOX) 1938, 123, 687

Citrus: Leaves, fumigated, hydrocyanic acid (BARTHOLOMEW and RABY)
1936, 113, 655

Citrus grandis: See Grapefruit

Clostridium acetobutylicum: Propionaldehyde and propionic acid reduction (BLANCHARD and MACDONALD)
1935, 110, 145

Racemase (CHRISTENSEN, PETERSON, and JOHNSON)
1938, 123, xxi

Clover: Sweet, disease, coagulation defect (QUICK)
1936, 114, lxxxii

Coagulation: Blood, blood platelet constituents and lipids, relation (CHARGAFF, BANCROFT, and STANLEY-BROWN) 1936, 116, 237
—, cerebroside sulfuric acids, synthetic, effect (CHARGAFF) 1937, 121, 187

—, heparin and anticoagulants, action (CHARGAFF and OLSON) 1937-38, 122, 153

—, inhibition, substances affecting (CHARGAFF, BANCROFT, and STANLEY-BROWN) 1936, 115, 155

—, —, technique for measuring

Coagulation—continued:

(CHARGAFF, BANCROFT, and STANLEY-BROWN)
1936, 115, 149

Blood, lipid inhibitors (CHARGAFF) 1937, 121, 175

—, protamine effect (CHARGAFF and OLSON)
1937-38, 122, 153

—, spleen lipid inhibitor (CHARGAFF)
1938, 125, 677

Defect, peptone shock and sweet clover disease (QUICK)
1936, 114, lxxxii

Milk, papain action (BALLS and HOOVER)
1937, 121, 737

Cobalt: Anemia, milk-produced, iron and copper with, effect (UNDERWOOD and ELVEHJEM) 1938, 124, 419

Coccarboxylase: Enzyme synthesis (LIPSCHITZ, POTTER, and ELVEHJEM)
1938, 124, 147

Cod liver oil: Antirachitic factor, distribution, chicken (RUSSELL, TAYLOR, and WILCOX)
1934, 105, lxxiv
1934, 107, 735

Blood, lactation, effect (McCAY and MAYNARD)
1935, 109, 29

Milk, effect (McCAY and MAYNARD) 1935, 109, 29

Toxicity, rabbit and calf (TURNER, MEIGS, and CONVERSE) 1936, 114, civ

Vitamin A, nature (TISCHER)
1938, 125, 475

Cod liver oil—continued:

Vitamin D, new (BILLS, MASENGALE, HICKMAN, and GRAY) 1938, 123, x

Coenzyme: *Hemophilus parainfluenzæ*, stability (KOHN) 1938, 123, lxxi

Coffee-bean: Chemistry (BENGIS and ANDERSON) 1934, 105, 139

Coffee-bean oil: Glycerides (BENGIS and ANDERSON) 1934, 105, 139

Collagen: Microdetermination (SPENCER) 1937, 119, xcii
Muscle, normal and dystrophic (SPENCER, MORGULIS, and WILDER) 1937, 120, 257

Colloid(s): Blood plasma, recovery from work, relation (KEYS and TAYLOR) 1935, 109, 55

Depressor, urine, purification (BISCHOFF and ELLIOT) 1935, 109, 419

Osmotic pressure, blood serum, determination (KEYS and TAYLOR) 1935, 109, 47

— — —, pregnancy (ROTT-SCHAEFER and BETHELL) 1936, 114, lxxxv

— — —, microdetermination, apparatus (DUBACH and HILL) 1935-36, 112, 313

Sterol, short electric waves, effect (MALISOFF and STENBUCK) 1936, 115, 87

Colloidal solutions: Ultrafiltration (FLEXNER) 1937, 121, 615

Colon: Bacteria and *aerogenes*, cellobiose fermentation (POE and KLEMME) 1935, 109, 43

Colon—continued:

Bacteria, sugars, rare, fermentation (POE and KLEMME) 1935, 109, 43

Color: Histological sections, stained, definition (KELLEY) 1935, 110, 141

Colorimeter: Micro-, photoelectric (EVELYN and CIPRIANI) 1937, 117, 365

—, —, absorption cell (EVELYN and GIBSON) 1937-38, 122, 391

Photoelectric (GOUDSMIT and SUMMERSON) 1935, 111, 421

(DILLER) 1936, 115, 315
—, stabilized (EVELYN) 1936, 115, 63

—, uric acid determination (DILLER) 1937, 118, 161

Colorimetry: Capillary tube, technique (RICHARDS, BORDLEY, and WALKER) 1933, 101, 179

Coloring matter: Apples (SANDO) 1937, 117, 45

Colostrum: Carotene (SEMB, BAUMANN, and STEENBOCK) 1934, 107, 697

Vitamin A (SEMB, BAUMANN, and STEENBOCK) 1934, 107, 697

Comb: Growth, male hormone preparation, reaction (GALLAGHER and KOCH) 1936, 114, xxxix

Response, sex hormones, effect (DORFMAN and GREULICH) 1937, 119, xxv

—, testicle hormone, light, relation (KOCH and GALLAGHER) 1934, 105, xlix

Complement: Activity, chemical agents, effect (ECKER, PILLEMER, MARTIENSEN, and WERTHEIMER)

1938, 123, 351

Function, hexoxidase effect (ECKER, PILLEMER, MARTIENSEN, and WERTHEIMER)

1938, 123, 359

Concanavalin: A, molecular weight (SUMNER, GRALÉN, and ERIKSSON-QUENSEL)

1938, 125, 45

B, molecular weight (SUMNER, GRALÉN, and ERIKSSON-QUENSEL)

1938, 125, 45

Coniine: (JACOBS and CRAIG)

1938, 124, 659

Connective tissue: Electrolytes (MANERY, DANIELSON, and HASTINGS)

1938, 124, 359

Copper: Anemia, milk-produced, cobalt with iron and, effect (UNDERWOOD and ELVEHJEM)

1938, 124, 419

Ascorbic acid oxidase, relation

(STOTZ, HARRER, and KING)

1937, 119, xcv, 511

— — oxidation catalyst (BARON, DeMEIO, and KLEMPERER)

1935-36, 112, 625

Blood, anemia, nutritional (SCHULTZE, ELVEHJEM, and HART)

1936, 116, 107

—, Eskimos (LEVINE, SACHS, and FABIAN)

1937, 119, lxiii

— plasma (BOYDEN and POTTER)

1937-38, 122, 285

Carbohydrate metabolism, rôle

(KEIL and NELSON)

1934, 106, 343

Deficiency, hydrogen sulfide-

Copper—continued:

treated milk, relation (SUMMERSON)

1938, 123, cxix

Dietary, tissue cytochrome and oxidase, relation (COHEN and ELVEHJEM)

1934, 107, 97

Egg yolk, hemoglobin formation, influence (SHERMAN, ELVEHJEM, and HART)

1934, 107, 289

Glutathione oxidation, catalyst (LYMAN and BARRON)

1937, 121, 275

Hemoglobin formation, iron supplement (SCHULTZE, ELVEHJEM, and HART)

1934, 106, 735

1936, 115, 453

— regeneration, anemia, iron and, effect (SMITH and OTIS)

1937, 119, xcii

-Low milk, anemia, hemoglobin production, iron and copper metabolism (BING, SAURWEIN, and MYERS)

1934, 105, 343

Metabolism and hemoglobin production, nutritional anemia (BING, SAURWEIN, and MYERS)

1934, 105, 343

—, chick embryo (McFARLANE and MILNE)

1934, 107, 309

Microdetermination, thiol acids, oxidation, relation (BJERRUM)

1936, 114, 357

Milk, anemia relation (KRAUSS and WASHBURN)

1936, 114, 247

Reagent, Shaffer-Somogyi (HARDING and DOWNS)

1933, 101, 487

Copper—continued:

Requirement, pig embryo
(WILKERSON)

1934, 104, 541

—, pregnancy (KYER and
BETHELL) 1936, 114, lx

Reticulocyte response, anemia,
effect (SCHULTZE and ELVE-
HJEM) 1933, 102, 357

Tissue and organ, anemia, nu-
tritional (SCHULTZE, ELVE-
HJEM, and HART)

1936, 116, 93

— respiration, relation (ELVE-
HJEM, COHEN, and STARE)

1934, 105, xxv

Tissues (HAHN and FAIRMAN)

1936, 113, 161

Urine, children (ROSS and
RABINOWITCH)

1935, 111, 803

Copper selenite: Nitrogen deter-
mination, Kjeldahl, catalyst
(SCHWÖGLER, BABLER, and
HURD)

1936, 113, 749

Coproporphyrin: I, embryo, for-
mation (SCHÖNHEYDER)

1938, 123, 491

Coprosterol: Formation, deu-
terium as indicator (SCHOEN-
HEIMER, RITTENBERG, and
GRAFF)

1935, 111, 183

(ANCHEL and SCHOEN-
HEIMER) 1938, 125, 23

—, sterol secretion and
(SCHOENHEIMER and
SPERRY)

1934, 107, 1

Corn: Yellow, white zein prepa-
ration (MASON and PALMER)

1934, 107, 131

See also Maize

Cornus florida: *See* Dogwood

Corpuscle: Blood. *See* Blood
cell

Corpus luteum: Vitamin C, es-
trous cycle and pregnancy,
relation (BISKIND and
GLICK) 1936, 113, 27

Cortin: Chemical nature (KEN-
DALL, MASON, MCKENZIE,
and MYERS)

1935, 109, p. 1

Chemistry and physiological
activity (KENDALL, MASON,
HOEHN, and MCKENZIE)

1938, 123, lxvii

-Like compounds, crystalline,
chemistry and physiological
activity (KENDALL, MASON,
HOEHN, and MCKENZIE)

1938, 123, lxvii

— substance, androstenedione
relation (MASON, MYERS,
and KENDALL)

1936, 116, 267

Corynebacterium diphtheriae: *See*
Diphtheria bacillus

Cottonseed meal: Milk, goat,
fatty acids, distribution, in-
gestion effect (RIEMEN-
SCHNEIDER and ELLIS)

1936, 114, 441

Cottonseed oil: Body fat, effect
(SPADOLA and ELLIS)

1936, 113, 205

Cotyledons: Fat and sterol me-
tabolism (MACLACHLAN)

1936, 114, 185

Coumaric acid: Plant tissue, de-
termination (ROBERTS and
LINK) 1937, 119, 269

Coumarin: Plant tissue, deter-
mination (ROBERTS and
LINK) 1937, 119, 269

Cow-pea: *See* Pea

Cranberry: Pomace, petroleum ether- and ether-soluble constituents (MARKLEY and SANDO) 1934, 105, 643

Creatine: Blood, determination, 3,5-dinitrobenzoic acid reagent (ANDES) 1937, 119, iv

-Creatinine metabolism, purines and drugs, injection effect (BEARD and PIZZOLATO) 1938, 123, vii

— production, growth, arginine, dietary, effect (MEYER and ROSE) 1933, 102, 461

Excretion, amino acid ingestion effect (BODANSKY) 1935-36, 112, 615

—, infancy (CATHERWOOD and STEARNS) 1937, 119, 201

Formation and storage, amino acids and related substances, injection effect (BEARD, BOGGESE, and PIZZOLATO) 1937, 119, ix

— — —, — acids, injection effect (BEARD and BOGGESE) 1936, 114, viii, 771

Glycine and guanidoacetic acid as precursors (BODANSKY) 1936, 115, 641

Heart, thyroid and thyroxine effect (BODANSKY) 1935, 109, 615

Liver, thyroid and thyroxine effect (BODANSKY) 1935, 109, 615

Metabolism, infancy and childhood (CATHERWOOD and STEARNS) 1936, 114, xviii

—, temperature and thyroid function relation (BODANSKY and DUFF) 1936, 114, xiii

Creatine—continued:

Microdetermination (BOR-SOOK) 1935, 110, 481

Muscle (CORLEY, KRAMER, and WOLF) 1935, 109, xxiii

—, phosphorus and potassium relation (MANGUN and MYERS) 1938, 123, lxxix

—, potassium and, relation (MYERS and MANGUN) 1936, 114, lxxv

—, thyroid and thyroxine effect (BODANSKY) 1935, 109, 615

Origin (BLOCK and BRAND) 1935, 109, viii
(BODANSKY) 1935, 109, xi
(MILHORAT) 1935, 111, 379

Testes, thyroid and thyroxine effect (BODANSKY) 1935, 109, 615

Creatine ester hydrochloride:
-Related compounds, titration, electrometric (FAILEY and BRAND) 1933, 102, 767

Titration, electrometric (FAILEY and BRAND) 1933, 102, 767

Creatinine: Blood (HAYMAN, JOHNSTON, and BENDER) 1935, 108, 675

(BEHRE and BENEDICT) 1935, 110, 245

(DANIELSON) 1936, 113, 181

(MILLER and DUBOS) 1937, 121, 447

—, laked, ultrafiltrates, presence (GAEBLER) 1937, 117, 397

Creatinine—continued:

Blood, normal and nephritic,
enzymatic determination
(MILLER and DUBOS)

1937, 121, 457

— plasma concentration, ex-
cretion rate, relation (DO-
MINGUEZ and POMERENE)

1934, 104, 449

— serum, isolation (GAEBLER)
1935, 109, xxxv

— —, picrate precipitates
(GAEBLER and ABBOTT)

1937, 119, xxxvi

— — ultrafiltrates, isolation
(GAEBLER and ABBOTT)

1938, 123, 119

— — —, precipitation (GAEB-
LER) 1936, 114, xxxviii

— — —, presence (GAEBLER)
1937, 117, 397

Clearance (RICHARDS, WEST-
FALL, and BOTT)

1936, 116, 749

Creatine-, metabolism, pu-
rines and drugs, injection
effect (BEARD and PIZZO-
LATO)

1938, 123, vii

—, production, growth,
arginine, dietary, effect
(MEYER and ROSE)

1933, 102, 461

-Decomposing enzymes, bac-
terial, production (DUBOS
and MILLER)

1937, 121, 429

Determination, sodium 3,5-
dinitrobenzoate use (LANG-
LEY and EVANS)

1936, 115, 333

Excretion, acidosis (ALVING
and GORDON)

1937, 120, 103

Creatinine—continued:

Excretion, amino acid ingestion
effect (BODANSKY)

1935-36, 112, 615

—, infancy (CATHERWOOD and
STEARNS) 1937, 119, 201

— rate, blood plasma concen-
tration, relation (DO-
MINGUEZ and POMERENE)

1934, 104, 449

Metabolism, infancy and child-
hood (CATHERWOOD and
STEARNS)

1936, 114, xviii

Microdetermination (BOR-
SOOK) 1935, 110, 481

Nitrogen, preformed and total,
basal metabolism, boys and
girls (WANG)

1937, 119, cii

Reaction, color, new (BENE-
DICT and BEHRE)

1936, 114, 515

Urine, glomerulus, frog (BORD-
LEY, HENDRIX, and RICH-
ARDS)

1933, 101, 255

—, normal and nephritic, en-
zymatic determination (MIL-
LER and DUBOS)

1937, 121, 457

—, origin (Goudsmit)

1936, 115, 613

Creatinine rubidium picrate:

Blood plasma filtrates, pre-
cipitation (BEHRE and
BENEDICT)

1937, 117, 415

Creatinuria: Adolescent males
(LIGHT and WARREN)

1934, 104, 121

Creeper fowl: (LANDAUER, UP-
HAM, and RUBIN)

1935, 108, 121

- Cresol:** Dinitro-, oxidation and fermentation effects (KRAHL and CLOWES) 1935, 111, 355
- Cresol red:** Dissociation constant, sea water (MITCHELL and TAYLOR) 1934, 105, lxii
- Crude fiber:** Bran, feces fatty acids, volatile, influence (OLMSTED, CURTIS, and TIMM) 1935, 108, 645
- Feces, determination (WILLIAMS and OLMSTED) 1935, 108, 653
- Cuticulin:** Silkworm, isolation and analysis (BERGMANN) 1938, 123, ix
- Cyanhydrin:** Dihydrostrophanthidin, syntheses (JACOBS and ELDERFIELD) 1936, 113, 625
- Cyanide:** Blood cell, red, oxidation, methylene blue and, effect (WENDEL) 1933, 102, 385
- Limulus polyphemus* hemocyanin, reaction (PEARSON) 1936, 115, 171
- Oxidation, induced (HARNED and DEERE) 1934, 104, 727
- Thiocyanate conversion, thyroid relation (BAUMANN, SPRINSON, and METZGER) 1933, 102, 773
- Cyanide hemochromogen:** (HOGNESS, ZSCHEILE, SIDWELL, and BARRON) 1937, 118, 1
- Oxidation-reduction potentials (BARRON and HASTINGS) 1935, 109, iv
- Cyclohexane:** Amino-, carboxylic acids, polarity (GREENSTEIN and WYMAN) 1938, 123, xlv
- Cyclopropane:** Blood, determination (ORCUTT and WATERS) 1937, 117, 509
- Cymarose:** Chemical constitution (ELDERFIELD) 1935, 111, 527
- Cystamine:** Cystine and methionine inadequacy, growth relation (JACKSON and BLOCK) 1936, 113, 135
- Fate, dog (VIRTUE and DOSTER-VIRTUE) 1938, 123, cxiii
- Cysteic acid:** Glycyl-, preparation (WHITE) 1933, 102, 249
- Mercuric sulfate and chloride action, cystine dismutation relation (LAVINE) 1937, 117, 309
- Metabolism (WHITE, LEWIS, and WHITE) 1937, 117, 663
- Taurine formation, relation (WHITE and FISHMAN) 1936, 116, 457
- Cysteine:** Aldehyde effect (HESS and SULLIVAN) 1937, 121, 323
- S-Benzyl-, benzylmercapturic acid conversion, animal organism (STEKOL) 1938, 124, 129
- Butyl alcohol extracts, determination (HESS and SULLIVAN) 1935, 108, 195
- l*-Cysteinyl-*l*-, hydrochloride, crystalline, synthesis (GREENSTEIN) 1937, 119, xli

Cysteine—continued:

- Cystine excretion, cystinuria, ingestion effect (LEWIS, BROWN, and WHITE) 1936, 114, 171
- Cystinuria, administration effect (HESS and SULLIVAN) 1938, 123, lv
- Determination (SHINOHARA) 1935, 109, 665, lxxxiv 1935, 110, 263 1935, 111, 435 1935-36, 112, 671, 683 (SHINOHARA and PADIS) 1935-36, 112, 697
- , aldehyde effect (HESS and SULLIVAN) 1937, 119, xlvii (SULLIVAN and HESS) 1937, 120, 537
- , cystine presence (HESS) 1934, 105, xxxix
- , gasometric (HESS) 1933, 103, 449
- , iodometric (LAVINE) 1935, 109, 141
- , photometric, phosphotungstic acid use (KASSELL and BRAND) 1938, 125, 115
- , pyruvic acid effect (SULLIVAN and HESS) 1937-38, 122, 11
- S-Ethylhomo-, synthesis and growth availability (DYER) 1938, 124, 519
- Homo-, isolation (RIEGEL and DU VIGNEAUD) 1935-36, 112, 149
- , metabolism, cystinuria (BRAND, CAHILL, and BLOCK) 1935, 110, 399
- , thiolactone conversion

Cysteine—continued:

- from (RIEGEL and DU VIGNEAUD) 1935-36, 112, 149
- Hypotrichosis, hereditary, effect (ROBERTS) 1937, 118, 627
- L-, purity, stereochemical (TOENNIES and BENNETT) 1935-36, 112, 497
- Mercuric sulfate and chloride action, cystine dismutation relation (LAVINE) 1937, 117, 309
- Metabolism, cystinuria (BRAND, CAHILL, and HARRIS) 1935, 109, 69
- N-Methyl-, and derivatives (BLOCH and CLARKE) 1938, 125, 275
- S-Methyl-, metabolism, cystinuria (BRAND, BLOCK, and CAHILL) 1937, 119, 689
- , sulfur, oxidation, body (DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481
- Oxidation (LAVINE) 1938, 123, lxxiv
- , iodine, sulfinic acid formation (SIMONSEN) 1933, 101, 35
- , sulfenic acid formation (TOENNIES) 1937, 119, xcix 1937-38, 122, 27
- A-Phospho-18-tungstic acid and, color reaction, molecular ratio (SHINOHARA) 1937, 120, 743
- Proteins, determination (KASSELL and BRAND) 1938, 125, 145

Cysteine—continued:

Thiourea and corresponding disulfides, relations (TOENNIES) 1937, 120, 297

Urine, determination, phospho-18-tungstic acid (SHINOHARA and PADIS) 1935-36, 112, 709

Cysteine hydrochloride: Standardization (SHINOHARA) 1935, 109, lxxxiv
1935-36, 112, 671

Cysteine sulfinic acid: Mercuric sulfate and chloride action, cystine dismutation relation (LAVINE) 1937, 117, 309

Cysteinyl-l-cysteine hydrochloride: *l*-, crystalline, synthesis (GREENSTEIN) 1937, 119, xli

Cystine: Absorption and metabolism, intestinal loop (ANDREWS, JOHNSTON, and ANDREWS) 1935, 109, iii

Aldehyde effect (HESS and SULLIVAN) 1937, 121, 323

bis-Anhydro-*l*-cystinyl-*l*-, synthesis (GREENSTEIN) 1937, 118, 321

Blood plasma, cystine and methionine administration, effect (LEWIS and BROWN) 1938, 123, lxxv

Butyl alcohol extracts, determination (HESS and SULLIVAN) 1935, 108, 195

Calculi, cystinuria, dog (GREEN, MORRIS, CAHILL, and BRAND) 1936, 114, 91

Casein, acid digest, determination, colorimetric (JONES and GERSDORFF) 1933, 101, 657

Cystine—continued:

Casein, alkali effect (JONES and GERSDORFF) 1934, 104, 99

—, deaminized (WHITE) 1933, 103, 295

— digestion, trypsin, liberation rate (JONES and GERSDORFF) 1936, 114, liii

— hydrolysis, liberation rate (JONES and GERSDORFF) 1933, 101, 657

—, peptic digests, determination, colorimetric (JONES and GERSDORFF) 1933, 101, 657

l-Cystinyl-*l*-, synthesis (GREENSTEIN) 1937, 121, 9

d-, acetyl and formyl derivatives, sulfur, oxidation, animal body (DU VIGNEAUD, LORING, and CRAFT) 1934, 107, 519

Deficiency, cholic acid administration relation (WHITE) 1935-36, 112, 503

-Deficient diet, cystamine, inadequate methionine, growth relation (JACKSON and BLOCK) 1936, 113, 135

— —, di-N-methylhomocystine and N-methylmethionine, growth effect (PATTERSON, DYER, and DU VIGNEAUD) 1936, 116, 277

— —, glutathione utilization (DYER and DU VIGNEAUD) 1936, 115, 543

— —, homocystine, growth-promoting properties (DU VIGNEAUD, DYER, and HARMON) 1933, 101, 719

Cystine—continued:

- Deficient diet, mesocystine, growth effect (LORING, DORFMAN, and DU VIGNEAUD) 1933, 103, 399
- Derivatives, absorption and metabolism, intestinal loop (ANDREWS, JOHNSTON, and ANDREWS) 1935, 109, iii
- , growth effect (JONES, ANDREWS, and ANDREWS) 1935, 109, xlvii
- , oxidized, replaceability (BENNETT) 1937, 119, x
- , reactivity (FRUTON and CLARKE) 1934, 106, 667
- Determination (SHINOHARA) 1935, 109, 665
1935, 110, 263
1935, 111, 435
1935-36, 112, 671
(SHINOHARA and PADIS) 1935-36, 112, 697
(SHINOHARA) 1937, 120, 743
- , aldehyde effect (HESS and SULLIVAN) 1937, 119, xlvii
(SULLIVAN and HESS) 1937, 120, 537
- , cysteine presence (HESS) 1934, 105, xxxix
- , gasometric (HESS) 1933, 103, 449
- , phospho-18-tungstic acid and sulfite (SHINOHARA) 1935-36, 112, 683
- , photometric, phospho-tungstic acid use (KASSELL and BRAND) 1938, 125, 115
- , Pulfrich photometer (KASSELL) 1935, 109, xlix

Cystine—continued:

- Determination, pyruvic acid effect (SULLIVAN and HESS) 1937-38, 122, 11
- , Sullivan method (ANDREWS and ANDREWS) 1936, 114, iv
- , Van Slyke amino nitrogen manometric method (KENDRICK and HANKE) 1936, 114, lviii
- Dicholyl-, and related substances, synthesis (VELICK and WHITE) 1938, 123, cxxiii
- Dietary, cystine amine as substitute (MITCHELL) 1935, 111, 699
- , dithioethylamine as substitute (MITCHELL) 1935, 111, 699
- , tissue proteins, effect (LEE and LEWIS) 1934, 107, 649
- Diketopiperazines, synthesis (GREENSTEIN) 1937, 118, 321
- Di-N-methylhomo-, synthesis and growth effect, cystine-deficient diet (PATTERSON, DYER, and DU VIGNEAUD) 1936, 116, 277
- Dismutation, mercuric sulfate and chloride action relation (LAVINE) 1937, 117, 309
- dl-, metabolism, growing dog, dietary protein, effect (STEKOL) 1934, 107, 641
- , —, protein-free diet, effect (STEKOL) 1934, 107, 225
- , precipitation, phospho-12-tungstic acid (TOENNIES and ELLIOTT) 1934, 105, xciii
1935, 111, 61

Cystine—continued:

- Egg albumin, crystalline, hydrolysis, liberation rate (CALVERY, BLOCK, and SCHOCK) 1936, 113, 21
- Epidermis, pellagra, relation (LEWIS) 1934, 105, lii
- Excretion, cystinuria, cystine, cysteine, and methionine ingestion, effect (LEWIS, BROWN, and WHITE) 1936, 114, 171
- , —, methionine and cysteine effect (HESS and SULLIVAN) 1938, 123, lv
- Glutenin (NEGLIA, HESS, and SULLIVAN) 1938, 125, 183
- Growth relation (WOMACK, KEMMERER, and ROSE) 1937, 121, 403
- Hair and stone, identity (LORING and DU VIGNEAUD) 1934, 107, 267
- , cystinuria (LEWIS and FRAYSER) 1935, 110, 23
- Hexo-, synthesis and physiological availability (JONES and DU VIGNEAUD) 1937, 120, 11
- Homo-, acetyl derivatives, optical isomers, structure and physiological action, relation (DU VIGNEAUD, DYER, and JONES) 1937, 119, 47
- , chemical constitution (DU VIGNEAUD, DYER, and HARMON) 1933, 101, 719
- , growth-promoting properties, cystine-deficient diet (DU VIGNEAUD, DYER, and HARMON) 1933, 101, 719

Cystine—continued:

- Homo-, isomers, optically active, methionine, naturally occurring, configurational relationship (DU VIGNEAUD and PATTERSON) 1935, 109, 97
- , —, —, preparation (DU VIGNEAUD and PATTERSON) 1935, 109, 97
- , metabolism, cystinuria (BRAND, CAHILL, and BLOCK) 1935, 110, 399
- , nutrition rôle (WHITE and BEACH) 1937-38, 122, 219
- , sulfur, oxidation, body (DU VIGNEAUD and CRAFT) 1934, 105, xcvi
- (DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481
- , synthesis (PATTERSON and DU VIGNEAUD) 1935, 111, 393
- d*-Homo-, growth effect (DYER and DU VIGNEAUD) 1935, 109, 477
- l*-Homo-, growth effect (DYER and DU VIGNEAUD) 1935, 109, 477
- Hydantoin, preparation and properties (ANDREWS and ANDREWS) 1934, 105, iv
- Insulin (MILLER and DU VIGNEAUD) 1937, 118, 101
- (SULLIVAN and HESS) 1937, 119, xcvi
- l*-, acetyl and formyl derivatives, sulfur, oxidation, animal body (DU VIGNEAUD, LORING, and CRAFT) 1934, 107, 519

Cystine—continued:

- l*-, dietary, growth effect (STEKOL) 1937-38, 122, 55
- , mercapturic acid synthesis, relation (STEKOL) 1937-38, 122, 333
- , metabolism (BUTTS, BLUNDEN, and DUNN) 1938, 124, 709
- , —, growing dog, dietary protein, effect (STEKOL) 1934, 107, 641
- , —, protein-free diet, effect (STEKOL) 1934, 107, 225
- , *dl*-methionine, and, metabolism, comparison (VIRTUE and LEWIS) 1934, 104, 59
- , precipitation, phospho-12-tungstic acid (TOENNIES and ELLIOTT) 1934, 105, xciii
1935, 111, 61
- , specific rotation (TOENNIES, LAVINE, and BENNETT) 1935-36, 112, 493
- Liver fat, effect (TUCKER and ECKSTEIN) 1937, 121, 479
- m*-, precipitation, phospho-12-tungstic acid (TOENNIES and ELLIOTT) 1934, 105, xciii
1935, 111, 61
- Mercuric sulfate and chloride action, cystine dismutation relation (LAVINE) 1937, 117, 309
- Meso-, cystine-deficient diet, growth effect (LORING, DORFMAN, and DU VIGNEAUD) 1933, 103, 399

Cystine—continued:

- Meso-, isolation and characterization (LORING and DU VIGNEAUD) 1933, 102, 287
- Metabolism (WHITE, LEWIS, and WHITE) 1937, 117, 663
(HALEY and SAMUELSEN) 1937, 119, 383
(JACKSON and BLOCK) 1937-38, 122, 425
- , cystine sulfoxide relation (MEDES) 1935, 109, lxiv
- , cystinuria (BRAND, CAHILL, and HARRIS) 1935, 109, 69
- Nail, finger, determination (SULLIVAN, HOWARD, and HESS) 1937, 119, 721
- Nails, cystinuria (LEWIS and FRAYSER) 1935, 110, 23
- Nitrous acid reaction (LOUGH and LEWIS) 1934, 104, 601
- Nutrition rôle (WHITE and BEACH) 1937-38, 122, 219
- Oxidation (LAVINE and TOENNIES) 1933, 101, 727
(TOENNIES and LAVINE) 1934, 105, 107
1936, 113, 571
(LAVINE) 1936, 113, 583
- , acid solution (ANDREWS) 1933, 102, 263
- Oxygenation, non-hydrolytic, course (TOENNIES and LAVINE) 1934, 105, 115
- Pento-, availability (DYER and DU VIGNEAUD) 1935, 108, 73
- , synthesis (DU VIGNEAUD, DYER, JONES, and PATTERSON) 1934, 106, 401

Cystine—*continued*:

- Proteins, deaminized (HESS and SULLIVAN) 1936, 114, xlix
- , determination (BAERNSTEIN) 1936, 115, 33 (KASSELL) 1937, 119, lvi
- , —, hydrolysis time, relation (SULLIVAN and HESS) 1937, 117, 423
- Racemization, acid solution (ANDREWS) 1933, 102, 263
- Reactivity (FRUTON and CLARKE) 1934, 106, 667
- Related disulfides, determination, Pulfrich photometer (KASSELL) 1935, 109, xlix
- sulfur-containing compounds, nitrous acid reaction (LOUGH and LEWIS) 1934, 104, 601
- Stability, acid solution (SHINOHARA and KILPATRICK) 1934, 105, 241
- , digestion mixtures (JONES and GERSDORFF) 1936, 114, liii
- Stereoisomers, infra-red absorption spectra (WRIGHT) 1937, 120, 641
- , oxidation, animal body (DU VIGNEAUD, CRAFT, and LORING) 1934, 104, 81
- , solubility (LORING) 1934, 105, liv (LORING and DU VIGNEAUD) 1934, 107, 267
- Stone and hair, identity (LORING and DU VIGNEAUD) 1934, 107, 267

Cystine—*continued*:

- Sulfur-containing amino acids, diet, replaceability (BENNETT) 1938, 123, viii
- Test, colorimetric, Sullivan, substances affecting (ANDREWS and ANDREWS) 1937, 118, 555
- Tetradeterohomo-, synthesis (PATTERSON and DU VIGNEAUD) 1938, 123, 327
- Tissue, determination (GRAFF, MACULLA, and GRAFF) 1937, 121, 81
- Urine, cystinuria, source (BRAND, BLOCK, and CAHILL) 1937, 119, xiv
- , determination (SULLIVAN and HESS) 1936, 116, 221
- , —, iodometric (VIRTUE and LEWIS) 1934, 104, 415
- , —, phospho-18-tungstic acid (SHINOHARA and PADIS) 1935-36, 112, 709
- , normal (MEDES) 1936, 114, lxxvii
- Utilization, growth, bromobenzene effect (WHITE and JACKSON) 1935, 111, 507
- Wool hydrolysates, isolation (TOENNIES and BENNETT) 1934, 105, xcii 1935-36, 112, 39
- Cystine amine:** Dietary cystine substitute (MITCHELL) 1935, 111, 699
- Cystine cyamidene:** (GREENSTEIN) 1935-36, 112, 35
- Cystine dimethyl ester:** Decomposition, spontaneous (COGHILL) 1936, 114, xx, 419

Cystine disulfoxide: l- (LAVINE and TOENNIES)

- 1935, 109, liii
 —, isolation (TOENNIES and LAVINE) 1936, 113, 571
 —, reactions (LAVINE) 1936, 113, 583

Cystine perchlorate: Oxygenation products, acetonitrile (TOENNIES and LAVINE)

1934, 105, 107

Cystine phenylhydantoin: Decomposition (ANDREWS and ANDREWS)

1933, 102, 253

Cystine sulfoxide: Cystine metabolism, relation (MEDES)

1935, 109, lxiv

Cystinuria: (LEWIS)

- 1935, 109, lv
 Ascorbic acid administration, effect (ANDREWS, ANDREWS, and RUTENBER) 1938, 123, iii
 Casein metabolism (BRAND, BLOCK, KASELL, and CAHILL) 1937, 119, 669
 Cysteine administration, effect (HESS and SULLIVAN) 1938, 123, lv
 — metabolism (BRAND, CAHILL, and HARRIS) 1935, 109, 69
 Cystine, cysteine, and methionine ingestion, effect (LEWIS, BROWN, and WHITE) 1936, 114, 171
 — metabolism (BRAND, CAHILL, and HARRIS) 1935, 109, 69
 γ , γ' -Dithiodibutyric acid metabolism (BRAND, BLOCK, and CAHILL) 1937, 119, 689

Cystinuria—continued:**Dog** (BRAND and CAHILL)

- 1936, 114, xv
 (BRAND, CAHILL, and SLAN-ETZ) 1938, 123, xvi

—, cystine calculi and urine sulfur distribution (GREEN, MORRIS, CAHILL, and BRAND) 1936, 114, 91

Egg albumin, crystalline, metabolism (BRAND, CAHILL, and KASELL)

1938, 125, 415

Glutathione metabolism (BRAND, CAHILL, and HARRIS) 1935, 109, 69

Hair and nails, cystine (LEWIS and FRAYSER)

1935, 110, 23

Homocysteine and homocystine metabolism (BRAND, CAHILL, and BLOCK)

1935, 110, 399

dl- α -Hydroxy- γ -methiobutyric acid metabolism (BRAND, BLOCK, and CAHILL)

1937, 119, 681

Lactalbumin and reduced lactalbumin, metabolism (KASELL, CAHILL, and BRAND)

1938, 125, 423

— metabolism (BRAND, BLOCK, KASELL, and CAHILL)

1937, 119, 669

—, reduced, metabolism (KASELL) 1938, 123, lxvi

dl- γ -Methiol- α -hydroxybutyric acid metabolism (BLOCK, BRAND, and CAHILL)

1937, 119, xii

Cystinuria—*continued*:

Methionine administration, effect (ANDREWS, ANDREWS, and RUTENBER)

1938, 123, iii

(HESS and SULLIVAN)

1938, 123, lv

— hydroxy analogue, metabolism (BRAND, BLOCK, and CAHILL)

1937, 119, 681

— metabolism (BRAND, CAHILL, and HARRIS)

1935, 109, 69

S-Methylcysteine metabolism (BRAND, BLOCK, and CAHILL)

1937, 119, 689

Serine metabolism (BRAND and CAHILL)

1935, 109, 545

γ -Thiobutyric acid metabolism (BRAND, BLOCK, and CAHILL)

1937, 119, 689

Urine (STEKOL)

1934, 105, lxxxv

— cystine, source (BRAND, BLOCK, and CAHILL)

1937, 119, xiv

Cystinyl-l-cystine: bis-Anhydro-l-, synthesis (GREENSTEIN)

1937, 118, 321

l-, synthesis (GREENSTEIN)

1937, 121, 9

Cystinyldialanine: Synthesis (WHITE)

1934, 106, 141

Cystinyldiglycine: Crystalline, synthesis and isolation from glutathione (LORING and DU VIGNEAUD)

1935, 111, 385

Synthesis (WHITE)

1934, 106, 141

Cystinyl peptide(s): Aminopolypeptidase and dipeptidase, substrate relation (GREENSTEIN)

1938, 124, 255

Cystinyl peptide(s)—*continued*:

Physical chemistry (GREENSTEIN, KLEMPERER, and WYMAN)

1938, 125, 515

Cytochrome(s): Action, mechanism (COOLIDGE)

1938, 123, 451

C-cytochrome oxidase complex (STOTZ, ALTSCHUL, and HOGNESS)

1938, 124, 745

C, oxidized, films (HARKINS and ANDERSON)

1938, 125, 369

—, potential (STOTZ, SIDWELL, and HOGNESS)

1938, 123, cxviii

1938, 124, 11

Carboxy-, C, spectroscopy (ALTSCHUL and HOGNESS)

1938, 124, 25

Indophenol oxidase action, rôle (STOTZ, SIDWELL, and HOGNESS)

1938, 124, 733

Muscle contraction, oscillographic study (URBAN and PEUGNET)

1937, 119, c

Tissue, dietary iron and copper, relation (COHEN and ELVEHJEM)

1934, 107, 97

Yeast, spectrography, temperature effect (URBAN)

1935, 109, xciii

Cytochrome oxidase: Cytochrome C-, complex (STOTZ, ALTSCHUL, and HOGNESS)

1938, 124, 745

D

Dalmatian coach-dog: Purine metabolism, epinephrine influence (CHAIKOFF, LARSON, and READ)

1935, 109, 395

—, insulin effect (CHAIKOFF and LARSON)

1935, 109, 85

- Decenoic acids:** Hexa-, natural fats, unsaturated linkage, position (SPADOLA and RIEMENSCHNEIDER) 1937, 121, 787
- Deficiency disease:** Growth, wheat germ oil effect (BLUMBERG) 1935, 108, 227
- Vitamin B complex, relation (HOGAN, RICHARDSON, and JOHNSON) 1937, 119, p. 1
- Dehydration:** Blood and muscle salt and water exchange, effect (EICHELBERGER and HASTINGS) 1937, 118, 205
- serum chloride, base, and protein, exercise, influence (MORSE and SCHLUTZ) 1936, 114, lxxiv
- Inorganic salt balance (WILEY and WILEY) 1933, 101, 83
- Pancreas and intestine enzymes, effect (ROSS and SHAW) 1934, 104, 131
- Tissues, effect (HAMILTON and SCHWARTZ) 1935, 109, 745
- Dehydroascorbic acid:** Reduction, guinea pig tissue (SCHULTZE, STOTZ, and KING) 1937-38, 122, 395
- Dehydrogenase:** Anaerobic, *Escherichia coli*, activity, temperature effect (GOULD and SIZER) 1938, 124, 269
- Dental caries:** Enamel and dentin, fluorine (ARMSTRONG) 1937, 119, v
- Metabolism, children (BOYD, DRAIN, and STEARNS) 1933, 103, 327
- Dentin:** Absorption coefficients, x-ray (HOLLANDER) 1936, 114, lii
- Composition (ARMSTRONG) 1935, 109, iv
- (LOGAN) 1935, 110, 375
- Constitution (ARMSTRONG and BREKHUS) 1937, 120, 677
- Crystal structure and composition, relation (GRUNER, McCONNELL, and ARMSTRONG) 1937, 121, 771
- Fluorine, sound and carious teeth (ARMSTRONG) 1937, 119, v
- Depressor activity:** *d*-Carnosine (DU VIGNEAUD and HUNT) 1936, 114, cv
- 1936, 115, 93
- l*-Carnosine, β -alanine radical, relation (HUNT and DU VIGNEAUD) 1938, 123, lxi
- Dermatitis:** Anti-, factor, chick (WOOLLEY, WAISMAN, MICKELSEN, and ELVEHJEM) 1938, 125, 715
- , —, identity (HOGAN and RICHARDSON) 1935, 109, xliii
- , factors, rat and chick, deficiency, puppies on synthetic diet, effect (FOUTS, LEPKOVSKY, HELMER, and JUKES) 1937, 119, xxxiv
- Chick, dietary, feedingstuff filtrate factor distribution (JUKES and LEPKOVSKY) 1936, 114, 117
- , —, filtrate factor relation and properties (LEPKOVSKY and JUKES) 1936, 114, 109, lxi

Dermatitis—continued:

Chick, nicotinic acid inactivity
(MICKELSEN, WAISMAN, and
ELVEHJEM)

1938, 124, 313

Egg white, curative factor, ex-
traction (LEASE and PAR-
SONS)

1934, 105, p. 1

Erythematous, dietary oils,
effect (SALMON)

1938, 123, civ

Florid, production and cure
(GUERRANT, CHORNOCK, and
DUTCHER)

1937, 119, xlii

Rat, vitamin G complex rela-
tion (DANN)

1936, 114, xxiv

See also Acrodynia

Desoxysarsasapogenin: (SIMP-
SON and JACOBS)

1935, 110, 565

Detoxication: Processes, dog
(STEKOL and CERECEDO)

1934, 105, lxxxv

Deuterium: Amino acid metab-
olism indicator (RITTEN-
BERG, FOSTER, and SCHOEN-
HEIMER)

1938, 123, cii

— stability in (KESTON and
RITTENBERG)

1938, 123, lxviii

Bile acid formation indicator
(SCHOENHEIMER, RITTEN-
BERG, BERG, and ROUSSE-
LOT)

1936, 115, 635

Butyric acid metabolism indi-
cator (RITTENBERG, SCHOEN-
HEIMER, and EVANS)

1937, 120, 503

Caproic acid metabolism indi-
cator (RITTENBERG, SCHOEN-
HEIMER, and EVANS)

1937, 120, 503

Deuterium—continued:

Cholesterol, synthesis, biolog-
ical, use (RITTENBERG)

1937, 119, lxxxiii

-Containing fatty acids, prepa-
ration (VAN HEYNINGEN,
RITTENBERG, and SCHOEN-
HEIMER)

1938, 125, 495

Coprosterol formation indi-
cator (SCHOENHEIMER, RIT-
TENBERG, and GRAFF)

1935, 111, 183

(ANCHEL and SCHOEN-
HEIMER)

1938, 125, 23

Fat and cholesterol formation,
indicator (RITTENBERG and
SCHOENHEIMER)

1937, 121, 235

— metabolism indicator
(SCHOENHEIMER and RIT-
TENBERG)

1935, 111, 175

Fate, body, mammalian
(SMITH, TRACE, and BAR-
BOUR)

1936, 116, 371

Fatty acid desaturation indi-
cator (SCHOENHEIMER and
RITTENBERG)

1936, 113, 505

— — hydrogenation indicator
(RITTENBERG and SCHOEN-
HEIMER)

1937, 117, 485

— — metabolism, intermedi-
ary, indicator (SCHOEN-
HEIMER)

1937, 119, lxxxvii

— — synthesis and destruction
indicator (SCHOENHEIMER
and RITTENBERG)

1936, 114, 381

Labile, compounds containing,
metabolism indicators (AN-
CHEL and SCHOENHEIMER)

1938, 125, 23

Deuterium—continued:

Metabolism, intermediary, indicator (SCHOENHEIMER and RITTENBERG)

1935, 111, 163

(RITTENBERG and SCHOENHEIMER) 1935, 111, 169

(FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER)

1938, 124, 159

(RITTENBERG, KESTON, SCHOENHEIMER, and FOSTER) 1938, 125, 1

(FOSTER, RITTENBERG, and SCHOENHEIMER)

1938, 125, 13

Non-labile, amino acids treated with deuterium oxide (STEKOL and HAMILL)

1937, 120, 531

Organic compounds, determination (KESTON, RITTENBERG, and SCHOENHEIMER)

1937-38, 122, 227

— molecules, synthesis and destruction, body, as indicator (SCHOENHEIMER and RITTENBERG)

1936, 114, lxxxvii

Stearic acid conversion to palmitic acid, indicator (SCHOENHEIMER and RITTENBERG) 1937, 120, 155

Deuterium oxide: Amino acid deuterium, non-labile (STEKOL and HAMILL)

1937, 120, 531

Deuteroamino acids: Formation, biological, deuterium as indicator (FOSTER, RITTENBERG, and SCHOENHEIMER) 1938, 125, 13

Dextrins: Molecular size determination, periodic acid oxidation (CALDWELL and HIXON) 1938, 123, 595

Dextrose: Blood cholesterol fractions, ingestion effect (FITZ and BRUGER)

1936, 113, 297

(SPERRY) 1936, 116, 65

— serum inorganic sulfate, ingestion effect (MATTICE, BRUGER, and DEREN)

1935, 109, lx

See also Glucose

Diabetes: Blood sugar, low, tolerance (PAUL and GIBSON)

1938, 123, xci

Brain carbohydrate oxidation (BAKER, FAZEKAS, and HIMWICH) 1938, 125, 545

Coma, blood reducing substance, fermentable, zinc-precipitable (REINHOLD and LETONOFF)

1936, 114, lxxxiii

Glucose excretion, exercise effect (CHAMBERS, HIMWICH, and KENNARD)

1935, 108, 217

Hypoglycemia, autogenous (PAUL and GIBSON)

1938, 123, xci

Nerve lipids, effect (RANDALL) 1938, 125, 723

Remissions (PAUL and GIBSON) 1938, 123, xci

Skin lipids (MATTHEWS, NEWTON, and BLOOR)

1935, 108, 145

Tendency, rats (COLE and HARNED) 1938, 123, xxv

Diabetes—continued:

Tissue, ketone substances,
production and destruction
(GOLDFARB and HIMWICH)

1933, 101, 441

Diacetic acid: Metabolism, normal and castrated rats, with and without theelin (GRUNEWALD, CUTLER, and DEUEL)

1934, 105, 35

—, pituitary extract, anterior, rôle (BUTTS, CUTLER, and DEUEL)

1934, 105, 45

Diacetone *d*-galacturonic acid: Methyl ester, catalytic reduction (LEVENE and CHRISTMAN)

1937-38, 122, 661

Diacetyl adenosine: Phosphorylation (LEVENE and TIPSON)

1937, 121, 131

Diacetylchloroglucurone: Synthesis (GOEBEL and BABERS)

1933, 101, 173

Diaminodiphenyl sulfide: -Related compounds, *β -Streptococcus hæmolyticus*, effect (RAIZISS, SEVERAC, MOETSCH, and CLEMENCE)

1938, 123, xcix

β -Streptococcus hæmolyticus, effect (RAIZISS, SEVERAC, MOETSCH, and CLEMENCE)

1938, 123, xcix

Diaminodiphenyl sulfone: -Related compounds, *β -Streptococcus hæmolyticus*, effect (RAIZISS, SEVERAC, MOETSCH, and CLEMENCE)

1938, 123, xcix

β -Streptococcus hæmolyticus, effect (RAIZISS, SEVERAC, MOETSCH, and CLEMENCE)

1938, 123, xcix

Diaminophosphatide: Blood cells, red, stromata, determination (THANNHAUSER and SETZ)

1936, 116, 533

— serum, determination (THANNHAUSER and SETZ)

1936, 116, 533

Organs and fluids, determination (THANNHAUSER and SETZ)

1936, 116, 533

Diastase: Microdetermination (SOMOGYI)

1938, 125, 399

Plant, types (TELLER)

1936, 114, 425

Saliva (COHN and BROOKES)

1936, 114, 139

Starch split-products (SOMOGYI)

1938, 124, 179

Diazobenzenesulfonic acid:

Theelin determination, reagent (SCHMULOVITZ and WYLIE)

1936, 116, 415

Dibenzanthracene: Mitochondria, vitamin A and total lipids, effect (GOERNER)

1937-38, 122, 529

Dibromoxyhydrouracil: Alkali action (HEYROTH)

1936, 114, p. 1

Dicarboxylic acids: Sodium salts, citric acid formation, injection effect (ORTEN and SMITH)

1937, 119, lxxiv

(SMITH and ORTEN)

1938, 124, 43

Dichlorofluorescein: Cerebrospinal fluid and blood serum chlorides, microdetermination (SAIFER and KORNBLUM)

1935-36, 112, 117

Dichlorophenol indophenol: 2,6-
standardization by gluco-
reductone, ascorbic acid de-
termination (KERTESZ)

1934, 104, 483

Dicholylcystine: -Related sub-
stances, synthesis (VELICK
and WHITE)

1938, 123, cxxiii

Synthesis (VELICK and WHITE)

1938, 123, cxxiii

Dideuteromethionine: Synthesis
(PATTERSON and DU VI-
GNEAUD) 1938, 123, 327

Diet: (*See note on p. 221*)

Anemia relation, monkey
(DAY, LANGSTON, and SHUK-
ERS) 1936, 114, xxv

Blood lipids and (BLOOR)
1933, 103, 699

— saccharoids, relation
(SMELO, KERN, and DRAB-
KIN) 1938, 125, 461

Dermatitis, chick, feedingstuff
filtrate factor distribution
(JUKES and LEPKOVSKY)

1936, 114, 117

—, —, filtrate factor relation
and properties (LEPKOVSKY
and JUKES)

1935, 114, 109, lxi

Egg protein composition, effect
(CALVERY and TITUS)

1934, 105, 683

Encephalomalacia, chick, soy
bean oil non-saponifiable
matter, action (GOETTSCH
and PAPPENHEIMER)

1936, 114, xl

—, —, vegetable oils, effect
(GOETTSCH and PAPPEN-
HEIMER) 1936, 114, 673

Diet—continued:

Essential element, proteins
(ROSE) 1934, 105, lxxiii

—, —, isolation (ROSE,
MCCOY, MEYER, CARTER,
WOMACK, and MERTZ)

1935, 109, lxxvii

Factor, essential, new (ELVE-
HJEM, KOEHN, and OLESON)

1936, 115, 707

—, —, yeast and liver extract
(ELVEHJEM, KOEHN, and
OLESON) 1936, 114, xxxi

— in carbohydrate metabolism
(WESSON and MURRELL)

1933, 102, 303

Fat deficiency, effect (BROWN
and BURR)

1936, 114, xvi

Fatty liver production (BLATH-
ERWICK, MEDLAR, BRAD-
SHAW, POST, and SAWYER)

1933, 103, 93

Hemoglobin formation, preg-
nancy, influence (KYER and
BETHELL) 1936, 114, lx

Hemorrhagic disease, chick,
relation (ALMQUIST and
STOKSTAD)

1935, 111, 105

Inorganic salts, tissue ash, in-
fluence (EPPRIGHT and
SMITH) 1937, 118, 679

Ketone body excretion, effect
(CHAMBERLIN, FURGASON,
and HALL) 1937, 121, 599

Leucopenia relation, monkey
(DAY, LANGSTON, and SHUK-
ERS) 1936, 114, xxv

Liver phosphate compounds,
effect (FLOCK, BOLLMAN, and
MANN) 1936, 114, xxxvi

1936, 115, 179

Diet—continued:

- Milk effect (MUELLER and COX) 1937, 119, lxxii
- Organic constituents, fluorine toxicosis, effect (PHILLIPS and HART) 1935, 109, 657
- Parathyroid hypertrophy production, relation (BAUMANN and SPRINSON) 1937, 119, vii
- Vitamin-free, lactoflavin in (SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER) 1936, 113, 787
- See also* Feedingstuff, Food, Nutrition, Ration
- Diethoxypyrimidine:** 2,4-, aceto-bromo-*d*-ribose and, interaction (HILBERT and RIST) 1937, 117, 371
- Diffusion layers:** Technique for study (TEORELL) 1936, 113, 735
- Digestion:** (*See note on p. 221*)
- Digitalis:** Sapogenins (JACOBS and SIMPSON) 1935, 110, 429
- Dihalophenol:** Metabolism effect, mechanism (CLOWES and KRAHL) 1936, 114, xix
- Dihydric substrates:** Tyrosinase action (GRAUBARD and NELSON) 1935, 111, 757
- Dihydrocarotene:** Ozonization, geronic acid formation (STRAIN) 1933, 102, 137
- Dihydroequilenin:** Determination, colorimetric (MARX and SOBOTKA) 1938, 124, 693
- Dihydroergosterol:** 22-, irradiated (MCDONALD) 1936, 114, lxv

- Dihydrolysergic acid:** Isomer (JACOBS and CRAIG) 1936, 115, 227
- Dihydrostrophanthidin:** Cyanhydrin syntheses with (JACOBS and ELDERFIELD) 1936, 113, 625
- Dihydrovitamin:** A, synthesis (GOULD) 1936, 114, xli
- Dihydroxyphenylalanine-tyrosine:** 3,4-, mixtures, components, determination, colorimetric (ARNOW) 1937, 118, 531
- Diiodotyrosine:** Absorption spectrum, ultraviolet (HEIDT) 1936, 115, 223
- Peptone, myxedema-relieving artificial protein, relation (SALTER and PEARSON) 1935-36, 112, 579
- Thyroid iodine and thyroxine, administration effect (FOSTER) 1934, 104, 497
- Diketopiperazines:** 2,5-, hydrolysis (SRINIVASAN and SREENIVASAYA) 1934, 105, 563
- Dimethylglycine:** Buffer (MICHAELIS and SCHUBERT) 1936, 115, 221
- Dimethyllysine:** α -N-, growth, availability (GORDON) 1937, 119, xxxvii
- Dinitrobenzoic acid:** 3,5-, blood creatine determination (ANDES) 1937, 119, iv
- Dinitrocresol:** Oxidation and fermentation effects (KRAHL and CLOWES) 1935, 111, 355
- Dinitrophenol:** α -, organ vitamin C, ascorbic acid administra-

Dinitrophenol—*continued*:

- tion with, effect (SVIRBELY)
1935, 111, 147
- Metabolism effect, mechanism
(CLOWES and KRAHL)
1936, 114, xix
- Muscle, frog, metabolism effect
(RONZONI and EHRENFEST)
1936, 115, 749
- Organ and tissue proteins,
thyroidectomy, effect (ADDIS,
KARNOFSKY, LEW, and POO)
1938, 124, 33
- Diodrast: Blood plasma protein
binding, effect (SMITH and
SMITH)
1938, 124, 107
- Dioxalatodianilinochromiato
acid: Salts (BERGMANN)
1937-38, 122, 569
- Dioxalatodipyridinochromiato
acid: Salts (BERGMANN)
1937-38, 122, 569
- Dioxane: Iodide microdetermination,
use (SAIFER and HUGHES)
1937, 118, 241
1937, 121, 801
- Dioxanilic acid: Salts (BERGMANN)
1937-38, 122, 569
- Dioxypyridic acid: Salts (BERGMANN)
1937-38, 122, 569
- Dipeptidase: Cystinyl peptides
as substrates (GREENSTEIN)
1938, 124, 255
- Embryo, cephalic region, chick
(LEVY and PALMER)
1938, 123, lxxiv
- extracts, chick (PALMER
and LEVY)
1938, 123, xc
- Specificity (BERGMANN, ZERVAS,
FRUTON, SCHNEIDER, and SCHLEICH)
1935, 109, 325

- Dipeptide: Phosphoric acid, isolation,
casein (LEVENE and HILL)
1933, 101, 711
- Diphenylamine blue: Blood filtrates
and urine chlorides, microdetermination
(SAIFER and KORNBLUM)
1936, 114, 551
- Diphenylpyrazoline-3-carboxylic
acid: 1,5-, body temperature,
environmental temperature effect
(SCHULTZ and HILL)
1938, 123, cvi
- Diphosphoglyceric acid: Blood cells
(GUEST and RAPOPORT)
1938, 123, xlvii
- —, ergosterol, irradiated,
effect (GUEST and RAPOPORT)
1938, 124, 599
- Diphospho-*l*-glyceric acid: Phosphatase,
hydrolysis (BODANSKY and BAKWIN)
1934, 104, 747
- Diphtheria: Toxin, ketene and formaldehyde
action (PAPPENHEIMER)
1938, 125, 201
- , vitamin C, effect (TORRANCE)
1937, 121, 31
- Diphtheria bacillus: Carnosine utilization
(MUELLER)
1938, 123, 421
- Nicotinic acid as growth accessory
(MUELLER)
1937, 120, 219
- Pimelic acid as growth accessory
(MUELLER)
1937, 119, 121
- Toxic protein from filtrates
(PAPPENHEIMER)
1937, 120, 543
- Tryptophane metabolism
(BAUGUCESS)
1935, 109, v

- Disulfide(s):** Cysteine relation (TOENNIES) 1937, 120, 297
 Cystine-related, determination, Pulfrich photometer (KASSELL) 1935, 109, xlix
 Thiourea relation (TOENNIES) 1937, 120, 297
- Disulfide compounds:** Determination (SHINOHARA) 1935, 109, 665
 1935, 110, 263
 1935, 111, 435
 1935-36, 112, 671, 683 (SHINOHARA and PADIS)
 1935-36, 112, 697, 709 (SHINOHARA) 1937, 120, 743
 Phosphotungstic acid reaction rate (KASSELL and BRAND) 1938, 125, 131
 Sulfite reaction rate (KASSELL and BRAND) 1938, 125, 131
- Disulfide groups:** Protein, reduction, immunological effect (BLUMENTHAL) 1936, 113, 433
- Dithio acids:** Substituted, blood sugar, effect (GREENSTEIN and FRIEDGOOD) 1936, 114, xliv
- Dithiodibutyric acid:** γ , γ' -, metabolism, cystinuria (BRAND, BLOCK, and CAHILL) 1937, 119, 689
- Dithioethylamine:** Dietary cystine substitute (MITCHELL) 1935, 111, 699
- Dithioformamidine:** Cysteine oxidation, sulfenic acid formation (TOENNIES) 1937, 119, xcix
- Dithiol:** Thioglycolic acid oxidation, metal, buffer and, effect (KHARASCH, LEGAULT, WILDER, and GERARD) 1936, 113, 537
- Diuresis:** Antidiuretic factor, pituitary, anterior (DOWNES and RICHARDS) 1935, 110, 81
- Divinyl oxide:** See Vinyl ether
- Djenkolic acid:** Homo-, metabolism (DYER) 1937, 119, xxviii
 Metabolism (DYER) 1937, 119, xxviii
 Synthesis (DU VIGNEAUD and PATTERSON) 1936, 114, 533
- Dogwood:** Flowering, chemical constituents (SANDO, MARKLEY, and MATLACK) 1936, 114, 39
- Dopa:** Formation from tyrosine, ultraviolet radiation (ARNOW) 1937, 120, 151
- Drug(s):** Blood saccharoids, relation (SMELO, KERN, and DRABKIN) 1938, 125, 461
 Brain oxidations, influence (BRAND, BRAND, and HERRMANN) 1934, 105, xiii
 Convulsant, brain carbohydrate and phosphocreatine, effect (KERR and ANTAKI) 1937-38, 122, 49
- Dulcitan:** Fate (CARR and KRANTZ) 1934, 107, 371
- Dulcitol:** Fate (CARR and KRANTZ) 1934, 107, 371
- Duodenum:** Drainage, bile acids, analysis, differential (DOUBILET) 1936, 114, 289

Duodenum—*continued*:

Glucose entering rate (KARR, AUSTIN, ABBOTT, and HOFFMAN) 1937, 119, lv

Dye(s): Cell substances, reactions (KELLEY)

1935, 110, 141

Mucin, staining (KELLEY and MILLER) 1935, 110, 119

Nuclear substances, staining (KELLEY and MILLER)

1935, 110, 113

Nucleoprotein, staining (KELLEY and MILLER)

1935, 110, 119

Reversible, cellular respiration, catalysis, mechanism (DEMEIO, KISSIN, and BARRON)

1934, 107, 579

Dyestuffs: Yeast extract fermentation and respiration, effect (MICHAELIS and SMYTHE) 1936, 113, 717

E

Echidna: Spines, amino acids, basic (BLOCK and HORWITT) 1937, 121, 99

Echinochrome: Isolation and composition (BALL)

1936, 114, vi

Ectoderm: Eukeratins and pseudokeratins (BLOCK)

1937, 121, 761

Edema fluid: Calcium, blood serum and, comparison (GILLIGAN, VOLK, and ALTSCHULE) 1933, 103, 745

Phosphate, blood serum and, comparison (GILLIGAN, VOLK, and ALTSCHULE)

1933, 103, 745

Edema fluid—*continued*:

Protein, blood serum and, comparison (GILLIGAN, VOLK, and ALTSCHULE)

1933, 103, 745

Edestin: Crystalline, pepsin partial hydrolysis products (WHITE) 1937, 119, ciii

Dietary protein source, salt-poor diet, effect (SWANSON, TIMSON, and FRAZIER)

1935, 109, 729

Sulfur distribution (KASSELL and BRAND)

1938, 125, 435

Egg: Albumin, acetyl derivatives, denaturation effect (HENDRIX and PAQUIN)

1936, 114, xlix

—, activity coefficient, glycine effect (RICHARDS)

1937-38, 122, 727

— carbohydrate, antigenic behavior (FERRY and LEVY)

1934, 105, xxvii

—, crystalline, enzyme hydrolysis (CALVERY)

1933, 102, 73

—, —, hydrolysis, amino nitrogen, cystine, tyrosine, and tryptophane liberation rate (CALVERY, BLOCK, and SCHOCK) 1936, 113, 21

—, —, metabolism, cystinuria (BRAND, CAHILL, and KASSELL) 1938, 125, 415

—, —, peptic hydrolysis products, fractionation (CALVERY) 1935-36, 112, 171 (CALVERY and SCHOCK)

1936, 113, 15

Egg—continued:

- Albumin, crystalline, solutions,
 α - particles, irradiation effect
 (ARNOW) 1935, 110, 43
 —, denatured, monolayers
 (BULL) 1938, 125, 585
 —, heat denaturation, hydro-
 gen ion concentration effect
 (HENDRIX and WHARTON)
 1934, 105, 633
 —, heat-denatured, optical ro-
 tation (BARKER)
 1933, 103, 1
 —, —, refractivity (BARKER)
 1934, 104, 667
 —, isoelectric point, apparent,
 ionic strength effect (SMITH)
 1935, 108, 187
 —, peptic hydrolysis (CAL-
 VERY and SCHOCK)
 1935, 109, xvi
 — solutions, sulfhydryl groups
 (GREENSTEIN)
 1938, 125, 501
 —, structure (BERGMANN and
 NIEMANN) 1937, 118, 301
 —, surface denaturation (BULL
 and NEURATH)
 1937, 118, 163
 (BULL) 1938, 123, 17
 (WU and WANG)
 1938, 123, 439
 (BULL and NEURATH)
 1938, 125, 113
 Anti-, injury factor, isolation
 (GYÖRGY) 1937, 119, xliii
 Hemoglobin regeneration in-
 fluence (ROSE, VAHLTEICH,
 and MACLEOD)
 1934, 104, 217
 Lobster, ovoverdin (STERN and
 SALOMON)
 1937-38, 122, 461

Egg—continued:

- Proteins (BLOCK)
 1934, 105, 455
 —, diet of hen, effect (CAL-
 VERY and TITUS)
 1934, 105, 683
 Salmon, casing, protein
 (YOUNG and INMAN)
 1938, 123, cxxxi
 1938, 124, 189
 Turkey, chemistry (HEPBURN
 and MIRAGLIA)
 1934, 105, xxxviii
 White, antitrypsin (BALLS and
 SWENSON) 1934, 106, 409
 —, antitryptic activity, nutri-
 tional disorder, relation
 (PARSONS)
 1936, 116, 685
 —, cooking effect (PARSONS
 and JOHNSON)
 1938, 123, xci
 —, dermatitis, curative factor,
 extraction (LEASE and PAR-
 SONS) 1934, 105, p. 1
 —, hydrolysis, enzymatic
 (COHN and WHITE)
 1935, 109, 169
 — injury, protective factor,
 body storage (PARSONS,
 LEASE, and JOHNSON)
 1937, 119, lxxvii
 —, pellagra-like symptoms
 from, curative factor (LEASE,
 KELLY, and PARSONS)
 1936, 114, lxi
 — proteins, separation and
 characterization (YOUNG)
 1937, 120, 1
 —, toxicity, papain digestion,
 effect (PARSONS, JANSSEN,
 and SCHOENLEBER)
 1934, 105, lxvii

Egg—continued:

- Yolk color, pimiento pigments, effect (BROWN) 1937-38, 122, 655
- fat, depot fat, relation (ALMQUIST, LORENZ, and BURMESTER) 1934, 106, 365
- , iron and copper, hemoglobin formation, influence (SHERMAN, ELVEHJEM, and HART) 1934, 107, 289
- Elaidic acid:** Milk and, relation (McCONNELL and SINCLAIR) 1937, 118, 123
- Placenta and, relation (McCONNELL and SINCLAIR) 1937, 118, 123
- Tissue phospholipids, relation (SINCLAIR) 1935, 109, lxxxv
1935, 111, 515
- Elastin:** Composition (STEIN and MILLER) 1938, 125, 599
- Electrical transport:** Fractional, analytical use (WILLIAMS) 1935, 110, 589
- Electric heater:** Mineral analysis, evaporation, concentrated salt solutions (GUEST and LEVA) 1935, 110, 777
- Electric waves:** Short, sterol colloids, effect (MALISOFF and STENBUCK) 1936, 115, 87
- Electrode:** Calcium, crystals as (ANDERSON) 1936, 115, 323
(TENDELOO) 1937, 118, 253
- Ferrieyanide, sugar determination (SHAFFER and WILLIAMS) 1935, 111, 707

Electrode—continued:

- Glass, amino acids and peptides, determination, formol titration (DUNN and LOSHAKOFF) 1936, 113, 359
- , hydrogen ion concentration determination, biological fluids (HORWITT) 1938, 123, lx
- Microquinhydrone** (PIERCE) 1937, 117, 651
- , aqueous humor hydrogen ion concentration determination, rachitic and normal rats (PIERCE) 1935, 111, 501
- , urine, glomerulus, hydrogen ion concentration determination (PIERCE and MONTGOMERY) 1935, 110, 763
- Electrokinetics:** (MOYER and ABELS) 1937, 121, 331
- Surface chemistry (MOYER) 1937-38, 122, 641
(MOYER and ABRAMSON) 1938, 123, 391
- Electrolyte(s):** Balance, blood serum, diet deficient in inorganic constituents, effect (SMITH and SMITH) 1934, 107, 681
- Blood and muscle, distribution, adrenalectomy effect (HEGNAUER and ROBINSON) 1936, 116, 769
- , distribution, glucose intraperitoneal injection effect (ROBINSON and HEGNAUER) 1936, 116, 779
- , gas and, equilibrium (VAN SLYKE and SENDROY) 1933, 102, 505

Electrolyte(s)—continued:

- (VAN SLYKE, DILLON, and MARGARIA)
1934, 105, 571
- (SENDROY, DILLON, and VAN SLYKE)
1934, 105, 597
- Blood plasma and blood cells, red, relation (YANNET, DARROW, and CARY)
1935-36, 112, 477
- pressure, cisterna magna, injection, effect (MASON, RESNIK, and HARRISON)
1935, 109, lix
- serum (SMITH and SMITH)
1934, 107, 673 (SUNDERMAN)
1936, 113, 111
- —, exercise effect (MORSE and SCHLUTZ)
1938, 123, lxxxvii
- —, nutritional hypoproteinemia, effect (DARROW and CARY)
1934, 105, 327
- Body, body water distribution, relation (HARRISON, DARROW, and YANNET)
1936, 113, 515
- Brain, liver, and muscle, water and, growth effect (YANNET and DARROW)
1938, 123, 295
- Connective tissue (MANERY, DANIELSON, and HASTINGS)
1938, 124, 359
- Heart, disease effect (CULLEN, WILKINS, and HARRISON)
1933, 102, 415
- Muscle dystrophy (FENN and GOETTSCH)
1937, 120, 41

Electrolyte(s)—continued:

- Tissue, human, determination (CULLEN and WILKINS)
1933, 102, 403
- , —, disease effect (CULLEN, WILKINS, and HARRISON)
1933, 102, 415
- Yeast zymon carbon dioxide production, effect (STAVELY, CHRISTENSEN, and FULMER)
1935, 111, 771
- — fermentation, phosphate content, effect (STAVELY, CHRISTENSEN, and FULMER)
1935, 111, 791
- Electrophoresis:** Measurements, microscopic and moving boundary methods, comparison (MOYER)
1937-38, 122, 641
- Elm:** Slippery, bark, mucilage (ANDERSON)
1934, 104, 163
- Embryo:** Chick, copper metabolism (McFARLANE and MILNE)
1934, 107, 309
- , dipeptidase, cephalic region (LEVY and PALMER)
1938, 123, lxxiv
- , extracts, dipeptidase (PALMER and LEVY)
1938, 123, xc
- , iron metabolism (McFARLANE and MILNE)
1934, 107, 309
- , reproductive system, sex hormones, effect (WILLIER, GALLAGHER, and KOCH)
1935, 109, xcix
- Coproporphyrin I formation (SCHÖNHEYDER)
1938, 123, 491

Embryo—continued:

- Hemoglobin formation
(SCHØNHEYDER) 1938, 123, 491
- Pig, copper requirement
(WILKERSON) 1934, 104, 541
- Enamel:** Absorption coefficients,
x-ray (HOLLANDER) 1936, 114, lii
- Candy, acidified, effect (WEST
and JUDY) 1938, 123, cxxv
- Composition (ARMSTRONG) 1935, 109, iv
(LOGAN) 1935, 110, 375
- Constitution (ARMSTRONG and
BREKHUS) 1937, 120, 677
- Crystal structure and compo-
sition, relation (GRUNER,
McCONNELL, and ARM-
STRONG) 1937, 121, 771
- Fluorine, sound and carious
teeth (ARMSTRONG) 1937, 119, v
- Tooth, calcification (HOL-
LANDER, BODECKER, SAPER,
and APPLEBAUM) 1934, 105, xl
- Encephalomalacia:** Nutritional,
chicks, soy bean oil non-
saponifiable matter, action
(GOETTSCH and PAPPEN-
HEIMER) 1936, 114, xl
- , —, vegetable oils, effect
(GOETTSCH and PAPPEN-
HEIMER) 1936, 114, 673
- Energy:** Input, irradiated milk
vitamin D potency, relation
(O'BRIEN, McEWEN, and
MORGAREIDGE) 1937, 119, lxxiii

- Enterokinase:** Determination
(BATES and KOCH) 1935, 111, 197
- Enzyme(s):** Action (McGUIRE
and FALK) 1934, 105, 373
(FALK and McGUIRE) 1934, 105, 379
1935, 108, 61
(HECHT and CIVIN) 1936, 116, 477
- , mechanism (STERN) 1936, 114, ci, 473
- Activation (HELLERMAN and
PERKINS) 1934, 107, 241
1935-36, 112, 175
(STOCK, PERKINS, and
HELLERMAN) 1938, 125, 753
(HELLERMAN and STOCK) 1938, 125, 771
- Adsorption, cellulose effect
(TAUBER) 1936, 113, 753
- Alfalfa vitamin A destruction
(HAUGE) 1935, 108, 331
- Artificial, proteolytic, hemato-
porphyrin (BOYD) 1933, 103, 249
- Avitaminosis (SURE, KIK, and
BUCHANAN) 1935, 108, 19, 27
- Bacterial, creatinine-decom-
posing, production (DUBOS
and MILLER) 1937, 121, 429
- Benzyl stearate and benzyl
butyrate, hydrolysis (BALLS
and MATLACK) 1938, 125, 539
- Blood cell, red, carbon dioxide
hydration, catalytic effect
(STADIE and O'BRIEN) 1933, 103, 521

Enzyme(s)—continued:

- Blood cell, red, carbonic acid dehydration, catalytic effect (STADIE and O'BRIEN) 1933, 103, 521
- serum cholesterol esters, synthesis and hydrolysis (SPERRY and STOYANOFF) 1938, 123, cxiii
- — — —, synthesis and hydrolysis, bile salts, effect (SPERRY and STOYANOFF) 1937, 119, xciii
1937, 121, 101
- — — —, synthesis and hydrolysis, sodium glycocholate influence (SPERRY and STOYANOFF) 1937, 117, 525
- Coccarboxylase synthesis (LIPSCHITZ, POTTER, and ELVEHJEM) 1938, 124, 147
- Creatinine, blood and urine, normal and nephritic, determination (MILLER and DUBOS) 1937, 121, 457
- Egg white, raw and heat-treated, hydrolysis (COHN and WHITE) 1935, 109, 169
- Fibrinolytic, hemolytic streptococcus (GARNER) 1935, 109, xxxvi
- Glucose-1-phosphoric ester, 6-ester, conversion, tissue extracts (CORI, COLOWICK, and CORI) 1938, 124, 543
- Glycogen hydrolysis, conversion products (SOMOGYI) 1934, 105, lxxxi
- Histochemistry (WEIL and ELY) 1935-36, 112, 565

Enzyme(s)—continued:

- Intestine, new (BERGMANN and FRUTON) 1937, 117, 189
- Jejunal loop, transplanted (PIERCE, NASSET, and MURLIN) 1935, 108, 239
- Kidney, glutathione hydrolysis (SCHROEDER and WOODWARD) 1937, 120, 209
- Lactalbumin hydrolysis (MILLER and CALVERY) 1936, 116, 393
- Lactate-, -pyruvate system, oxidation-reduction potentials (BARRON and HASTINGS) 1934, 107, 567
- Lactic acid-racemizing, *Clostridium butylicum* (CHRISTENSEN, PETERSON, and JOHNSON) 1938, 123, xxi
- Lipolytic (SOBOTKA and GLICK) 1934, 105, 221
- , action (SOBOTKA and GLICK) 1934, 105, 199
- , adrenals, distribution (GLICK and BISKIND) 1935, 110, 575
- Milk-curdling, inhibitors (TAUBER) 1934, 107, 161
- Pancreas and intestine, dehydration effect (ROSS and SHAW) 1934, 104, 131
- Papain, activation (BERGMANN and ROSS) 1936, 114, 717
- Pectic (KERTESZ) 1937, 121, 589
- Peptide bonds, synthesis (BERGMANN and FRAENKEL-CONRAT) 1938, 124, 1
(BERGMANN and BEHRENS) 1938, 124, 7
- Pneumococcus, autolytic, vitreous humor, umbilical cord,

Enzyme(s)—continued:

- and streptococcus polysaccharide acids, hydrolysis by (MEYER, DUBOS, and SMYTH) 1937, 118, 71
- Protein degradation (BERGMANN and NIEMANN) 1937, 118, 781
- synthesis, intracellular (BERGMANN and FRAENKEL-CONRAT) 1937, 119, 707
- Proteolytic (BERGMANN, ZERVAS, FRUTON, SCHNEIDER, and SCHLEICH) 1935, 109, 325
(BERGMANN, ZERVAS, and FRUTON) 1935, 111, 225
(BERGMANN, ZERVAS, and ROSS) 1935, 111, 245
(BERGMANN and ROSS) 1935, 111, 659
(BERGMANN and ZERVAS) 1936, 114, 711
(BERGMANN, ZERVAS, and FRUTON) 1936, 115, 593
(BERGMANN and FRUTON) 1937, 118, 405
- , bacteria (BERGER, JOHNSON, and PETERSON) 1938, 124, 395
- , fig tree latex (ROBBINS and LAMSON) 1934, 106, 725
- , intracellular, nature (BERGMANN, FRUTON, and FRAENKEL-CONRAT) 1937, 119, 35
- , molds (BERGER, JOHNSON, and PETERSON) 1937, 117, 429
- , peptides in heavy water, action (FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER) 1938, 124, 159

Enzyme(s)—continued:

- Proteolytic, synthetic substrates, action (GREENSTEIN) 1935-36, 112, 517
- Purification, amino acid oxidation (BERNHEIM and BERNHEIM) 1935, 109, 131
- Solanum indicum* (TAUBER and KLEINER) 1934, 105, 679
- Starch hydrolysis, conversion products (SOMOGYI) 1934, 105, lxxxii
- Succinate-fumarate-, system (STOTZ and HASTINGS) 1937, 118, 479
- Urea-splitting, gastric juice protein, relation (MARTIN) 1933, 102, 131
- Vitamin B₁, interaction (TAUBER) 1938, 123, 499
- C determination (TAUBER and KLEINER) 1935, 110, 559
- Wool digestion (ROUTH and LEWIS) 1938, 124, 725
- hydrolysis (ROUTH) 1938, 123, civ
- Yeast nucleic acid decomposition by (DUBOS and THOMPSON) 1938, 124, 501
- See also Aminopeptidase, Amylase, etc.
- Epiallocholesterol: (SCHOENHEIMER and EVANS) 1936, 114, 567
- Epidermis: Cystine and iron, pellagra relation (LEWIS) 1934, 105, lii
- Stratum corneum amino acids, human keratins, comparison (WILKERSON) 1934, 107, 377
- —, isoelectric point (WILKERSON) 1935-36, 112, 329

Epidermis—*continued*:

Stratum corneum keratins, iso-electric point (WILKERSON)

1935, 109, xcix

— —, ζ -potential, salts, effect (WILKERSON)

1938, 123, cxxviii

Epinephrine: Adrenal, hypertension, essential, relation (KOEHLER) 1936, 114, lix

Blood amino acid, adrenalectomy, effect (DAVIS and VAN WINKLE)

1934, 104, 207

—, determination (WHITEHORN) 1935, 108, 633

Brain glycogen, free sugar, and lactic acid, effect (KERR, HEMPEL, and GHANTUS)

1937, 119, 405

Destruction, body tissues and body fluids (KOEHLER)

1934, 105, p. 1

Injection rate, normal and hypertensive cases, effect (KOEHLER, MARSH, and HILL) 1937, 119, lix

Muscle, frog, influence (HEGNAUER and CORI)

1934, 105, 691

Oxidation-reduction (BALL and CHEN) 1933, 102, 691

Purine metabolism, influence, Dalmatian coach-dog (CHAIKOFF, LARSON, and READ)

1935, 109, 395

-Related compounds, oxidation-reduction (BALL and CHEN) 1933, 102, 691

See also Adrenalin

Epiphysis: Cartilage reaction, normal and rachitic rats (PIERCE) 1938, 124, 115

Epithelium: Cells, proteinase and peptidase activity, pleural exudates (WEISS, KAPLAN, and LARSON)

1938, 125, 247

Equilenin: Determination, colorimetric (MARX and SOBOTKA)

1938, 124, 693

Dihydro-, determination, colorimetric (MARX and SOBOTKA) 1938, 124, 693

Equilibrium: (*See note on p. 221*)

Equilin: Urine, pregnancy, preparation (CARTLAND and MEYER) 1935-36, 112, 9

Erepsin: Animal, magnesium-activated leucyl peptidase (JOHNSON, JOHNSON, and PETERSON)

1936, 116, 515

Casein digestion, vitamin B deficiency influence (SURE, KIK, and BUCHANAN)

1935, 108, 19

Trypsin-, protein digestion, study technique (SURE, KIK, and BUCHANAN)

1935, 108, 11

Ergosterol: Activated, chicken, action (BILLS, MASSENGALE, McDONALD, and WIRICK)

1935, 108, 323

Crude, provitamin D (BILLS, MASSENGALE, McDONALD, and WIRICK)

1935, 108, 323

22-Dihydro-, irradiated (McDONALD) 1936, 114, lxv

Irradiated, antirachitic factor, tissue distribution, chicken (RUSSELL, TAYLOR, and WILCOX) 1934, 105, lxxiv

1934, 107, 735

Ergosterol—*continued*:

- Irradiated, blood cell diphosphoglyceric acid, effect (GUEST and RAPOPORT) 1938, 124, 599
- , fish liver oil concentrates and, hypervitaminoses, comparison (MORGAN, KIMMEL, and HAWKINS) 1937, 119, lxx
1937, 120, 85
- , toxicity, dog and rat (JONES) 1936, 114, liv
- Oxidation (MEYER) 1933, 103, 607
- Triacetyl-*d*-galacturonide, methyl ester, synthesis (SELL and LINK) 1938, 125, 235
- See also* Viosterol
- Ergosteryl sulfate salts:** Antirachitic activity, irradiated aqueous solutions (NATELSON, SOBEL, and KRAMER) 1934, 105, 761
- Preparation (NATELSON, SOBEL, and KRAMER) 1934, 105, 761
- Ergot:** Alkaloids (JACOBS and CRAIG) 1934, 104, 547
1934, 106, 393
1935, 108, 595
1935, 110, 521
1935, 111, 455
1936, 113, 759, 767
1936, 115, 227
(JACOBS and GOULD) 1937, 120, 141
(JACOBS and CRAIG) 1937–38, 122, 419
(CRAIG, SHEDLOVSKY, GOULD, and JACOBS) 1938, 125, 289

- Erythioneine:** Urine (SULLIVAN and HESS) 1933, 102, 67
- Ergotinine:** Cleavage, sodium and butyl alcohol (JACOBS and CRAIG) 1935, 108, 595
- Degradation, alkali (JACOBS and CRAIG) 1934, 104, 547
- Hydrolysis (JACOBS and CRAIG) 1935, 110, 521
- Erythrocyte:** *See* Blood cell, red
- Escherichia coli:** Dehydrogenase, anaerobic, activity, temperature effect (GOULD and SIZER) 1938, 124, 269
- Growth factors, effect (SAHYUN) 1935, 109, lxxviii
- Eschscholtzxanthin:** Poppy, California, petals (STRAIN) 1938, 123, 425
- Eskimo:** Basal metabolism (LEVINE) 1937, 119, lxi
- Blood iron and copper (LEVINE, SACHS, and FABIAN) 1937, 119, lxiii
- Capillary fragility (LEVINE) 1937, 119, lxii
- Metabolism (RABINOWITCH) 1936, 114, lxxxii
- Esterase:** Cholesterol, blood (SPERRY and SCHOENHEIMER) 1935, 109, lxxxvi
(SPERRY) 1935, 111, 467
- Choline, muscle, activity, prostigmine effect (STADIE and JONES) 1938, 123, cxiv
- , nerve impulses, relation (GLICK) 1938, 123, xlii
- , specificity (GLICK) 1938, 125, 729

Esterase—continued:

Liver, activity, hydrogen ion concentration influence (SOBOTKA and GLICK)

1934, 105, 221

—, specificity and inhibition (WEBER and KING)

1935, 108, 131

Pancreas, vitamin B deficiency influence (SURE, KIK, and BUCHANAN) 1935, 108, 27

Esterification: Muscle (CORI and CORI) 1936, 116, 129

Estradiol: β - (WHITMAN, WINTERSTEINER, and SCHWENK) 1937, 118, 789

Estrone, estriol, and, comparison (SEVRINGHAUS, HELLER, LAUSON, and GOLDEN)

1938, 123, cvii

Estrin: Pregnancy, excretion (MARRIAN, COHEN, and WATSON) 1935, 109, lix

Urine, determination, colorimetric (PINCUS, WHEELER, YOUNG, and ZAHL)

1936, 116, 253

—, —, photoelectric colorimeter (VENNING, EVELYN, HARKNESS, and BROWNE)

1937, 120, 225

Estriol: Estradiol, estrone, and, comparison (SEVRINGHAUS, HELLER, LAUSON, and GOLDEN) 1938, 123, cvii

Estrogenic activity: Urine, acid hydrolysis effect (PETERSON, GALLAGHER, and KOCH)

1937, 119, 185

Estrogenic diols: Urine, pregnant mares (WINTERSTEINER and HIRSCHMANN)

1937, 119, cvii

Estrogenic diols—continued:

Urine, pregnant mares, isolation (HIRSCHMANN and WINTERSTEINER)

1937-38, 122, 303

Estrogenic substances: Liquor folliculi, isolation (MACCORQUODALE, THAYER, and DOISY) 1936, 115, 435

Ovary, ketonic (WESTERFELD, MACCORQUODALE, THAYER, and DOISY)

1938, 123, cxxvi

Urine (WILSON, STRICKLER, and McELLROY)

1938, 123, cxxix

—, extraction, tungstic acid precipitation method (FREED, MIRSKY, and SOKIN) 1935-36, 112, 143

—, menstrual cycle, determination (GUSTAVSON, HAYS, and WOOD)

1937, 119, xlii

—, normal female, determination (GUSTAVSON and GREEN) 1934, 105, xxxiv (GUSTAVSON, WOOD, and HAYS) 1936, 114, xlvi

Uterus and vagina, infantile, effect (DORFMAN)

1937, 119, xxiv

Estrone: Estradiol, estriol, and, comparison (SEVRINGHAUS, HELLER, LAUSON, and GOLDEN) 1938, 123, cvii

Estrus: Corpus luteum vitamin C, relation (BISKIND and GLICK) 1936, 113, 27

-Inhibiting substances, testis concentrates (DUNCAN, GALLAGHER, and KOCH)

1937, 119, xxvii

- Ethanol:** Yeast zymoin carbon dioxide production, effect (STAVELY, CHRISTENSEN, and FULMER) 1935, 111, 785
 — — fermentation, phosphate content, effect (STAVELY, CHRISTENSEN, and FULMER) 1935, 111, 791
See also Ethyl alcohol
- Ethanolamine:** Choline and, separation (CHARGAFF) 1937, 118, 417
- Ether:** Anesthesia, urine ascorbic acid, effect (BOWMAN and MUNTWYLER) 1936, 114, xiv
 Blood oxygen determination, Van Slyke-Neill modified method, presence (SHAW and DOWNING) 1935, 109, 405
 -Containing gases, analysis, Haldane apparatus (SNYDER) 1937-38, 122, 21
- Ethereal sulfate:** Blood serum, microdetermination (POWER, WAKEFIELD, and PETERSON) 1934, 105, lxxvii
- Ethionine:** *See* Ethylhomocysteine
- Ethyl alcohol:** Body storage, equilibrium (HARGER, HULPIEU, and LAMB) 1937, 119, xlv
 1937, 120, 689
 Determination (FRIEDEMANN and KLAAS) 1936, 115, 47
 Formation, yeast, heavy water effect (EVANS and RITTENBERG) 1937, 119, xxxi
- Ethyl alcohol—continued:**
 Saliva, determination (FRIEDEMANN) 1934, 105, xxviii
 (FRIEDEMANN and BROOK) 1936, 114, xxxvii
See also Ethanol
- Ethylene:** Blood, determination (ORCUTT and WATERS) 1937, 117, 509
- Ethylenic double bonds:** Oxidation, photochemical (MEYER) 1933, 103, 597
- Ethylhomocysteine:** S-, synthesis and growth availability (DYER) 1938, 124, 519
- Ethyl iodide:** Blood solubility, erythrocyte count, correlation (COOL, GAMBLE, and STARR) 1934, 105, 97
- Ethylphenylacetic acid:** Hydrocarbons derived from (LEVENE and MARKER) 1935, 108, 409
- Euglobulin:** Blood serum, acid and base combination (GREEN) 1937, 119, xxxix
- Eukeratins:** Ectoderm (BLOCK) 1937, 121, 761
- Excelsin:** Osmotic pressure, molecular weight, and stability (BURK) 1937, 120, 63
- Excretion** (*See note on p. 221*)
 Paths, alkaline and saline waters, effect (HELLER and HADDAD) 1936, 113, 439
- Exercise:** Adrenalin effect (DILL and EDWARDS) 1934, 105, xx
 Blood gases, effect (LOONEY) 1938, 123, lxxvi

Exercise—continued:

Blood hydrogen ion concentration, effect (LOONEY)

1938, 123, lxxvi

— lactate and pyruvate, effect (JOHNSON and EDWARDS)

1937, 118, 427

1937, 119, liv

— lactic acid, effect (LOONEY)

1938, 123, lxxvi

— serum chloride and base, kidney excretion, effect (MORSE and SCHLUTZ)

1937, 119, lxxi

— — —, base, and protein, dehydration influence (MORSE and SCHLUTZ)

1936, 114, lxxiv

— — electrolytes, effect (MORSE and SCHLUTZ)

1938, 123, lxxxvii

Glucose excretion, diabetes, effect (CHAMBERS, HIMWICH, and KENNARD)

1935, 108, 217

Metabolism effect (DILL, EDWARDS, and ROBINSON)

1938, 123, xxx

Severe, recovery (KEYS)

1934, 105, xlv

Uric acid excretion, effect (QUICK)

1935, 110, 107

Urine lactate and pyruvate, effect (JOHNSON and EDWARDS)

1937, 118, 427

1937, 119, liv

See also Muscle, Work

Exudate: Pleural, cellular proteinase and peptidase activity (WEISS, KAPLAN, and LARSON)

1938, 125, 247

F

Factor 1: Crystalline, isolation (LEPKOVSKY)

1938, 124, 125

Factor W: (FROST and ELVEHJEM)

1937, 119, xxxiv

1937, 121, 255

Fasting: Blood lipids, effect (SURE, KIK, and CHURCH)

1933, 103, 417

— sugar, fowl, gizzarctomized (BURROWS, FRITZ, and TITUS)

1935, 110, 39

p-Bromophenylmercapturic acid synthesis (CONWAY)

1937, 121, 27

Ketone body excretion, effect (CHAMBERLIN, FURGASON, and HALL)

1937, 121, 599

Ketonuria, choline effect (DEUEL, MURRAY, HALLMAN, and TYLER)

1937, 120, 277

—, fatty livers, relation (DEUEL, HALLMAN, and MURRAY)

1937, 119, 257

Ketosis (GOLDFARB, BARKER, and HIMWICH)

1934, 105, 287

(FRIEDEMANN)

1934, 105, 335

Liver protein, effect (ADDIS, POO, and LEW)

1936, 115, 117

Lymph lipids, thoracic duct (RONY, MORTIMER, and IVY)

1933, 102, 161

Muscle glycogen, effect (BLATHERWICK, BRADSHAW, and SAWYER)

1936, 114, xii

Fasting—*continued*:

- Organ and tissue proteins, effect (ADDIS, POO, and LEW) 1936, 115, 111
- Phospholipid formation and destruction (PERLMAN, RUBEN, and CHAIKOFF) 1937-38, 122, 169
- Tissue proteins, effect (LEE and LEWIS) 1934, 107, 649
- Urine nitrogen partition, woodchuck (CARPENTER) 1937-38, 122, 343
- Fat(s)**: Abdominal, horse (SCHUETTE, GARVIN, and SCHWUEGLER) 1934, 107, 635
- Absorption, intestinal mucosa phospholipids (SINCLAIR) 1937, 119, xc
- rate, comparative (STEENBOCK, IRWIN, and WEBER) 1936, 114, c
- Acetone-soluble, *Bacillus lepræ* (ANDERSON, REEVES, and CROWDER) 1937, 121, 669
- , tubercle bacillus, human, pigment and anisic acid isolation (ANDERSON and NEWMAN) 1933, 101, 773
- , — —, —, trehalose isolation (ANDERSON and NEWMAN) 1933, 101, 499
- , yeast (NEWMAN and ANDERSON) 1933, 102, 219
- Blood, lipemia, alimentary, effect (WILSON and HANNER) 1934, 106, 323

Fat(s)—*continued*:

- Body, avocado-rich diet, influence (McAMIS and SWEET) 1936, 114, lxiv
- , cottonseed oil effect (SPADOLA and ELLIS) 1936, 113, 205
- , fatty acids, saturated, dietary, effect (BARBOUR) 1934, 106, 281
- , thiamine, riboflavin, and rice polish concentrate, effect (McHENRY and GAVIN) 1938, 125, 653
- Butter. *See* Butter fat
- Deficiency, dietary (BROWN and BURR) 1936, 114, xvi
- Deficient diet, carbohydrate metabolism (WESSON and MURRELL) 1934, 105, xcix
- Dietary, feces nitrogen, effect (MITCHELL) 1934, 105, 537
- , hair sterol, effect (ECKSTEIN) 1938, 125, 107
- , liver lipids, effect (RUBIN, PRESENT, and RALLI) 1937, 121, 19
- , sterol balances, effect (ECKSTEIN) 1938, 125, 107
- , vitamin B₁ growth requirement, relation (STIRN and ARNOLD) 1938, 123, cxvii
- Egg yolk, depot fat, relation (ALMQUIST, LORENZ, and BURMESTER) 1934, 106, 365
- Fatty acids, milk, goat (RIEMENSCHNEIDER and ELLIS) 1936, 113, 219

Fat(s)—continued:

Formation, deuterium as indicator (RITTENBERG and SCHOENHEIMER)

1937, 121, 235

-Free diet, male sterility effect (EVANS, LEPKOVSKY, and MURPHY)

1934, 106, 445

—, reproduction and lactation, effect (EVANS, LEPKOVSKY, and MURPHY)

1934, 106, 431

Glycogen formation, relation (DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT)

1937, 117, 119

-High diet, fasting ketonuria, choline effect (DEUEL, MURRAY, HALLMAN, and TYLER)

1937, 120, 277

Hydroxylated acids, determination (HAFNER, SWINNEY, and WEST)

1936, 116, 691

Ketosis relation (GOLDFARB, BARKER, and HIMWICH)

1934, 105, 287

Liver and muscle, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER)

1934, 104, 519

—, cholesterol and choline effect (BEST and RIDOUT)

1936, 114, ix

—, depancreatized dogs, insulin effect (CHAIKOFF and KAPLAN)

1937, 119, 423

—, ketonuria relation (DEUEL, HALLMAN, and MURRAY)

1937, 119, xxii

—, source (BARRETT, BEST, and RIDOUT)

1938, 123, iii

Fat(s)—continued:

Liver, water storage relation (KAPLAN and CHAIKOFF)

1936, 116, 663

Metabolism, deuterium as indicator (SCHOENHEIMER and RITTENBERG)

1935, 111, 175

— hormone, genital tract, effect (HARROW and NAIMAN)

1934, 105, xxxv

—, intermediary, blood serum lipids, relation (HANSEN, WILSON, and WILLIAMS)

1936, 114, 209

—, lactation (MAYNARD and McCAY)

1935, 109, lxi

—, liver injury by carbon tetrachloride, effect (WINTER)

1938, 124, 339

—, — phospholipid, relation (SINCLAIR)

1935, 111, 515

—, plants (MACLACHLAN)

1936, 113, 197

1936, 114, 185

—, vitamin B₁ relation (WHIPPLE and CHURCH)

1935, 109, xcvi

Milk, blood precursor (MAYNARD, HODSON, ELLIS, and McCAY)

1937, 119, lxvi

—, diet lipids, effect (MUELLER and COX)

1938, 123, lxxxviii

—, human (BOSWORTH)

1934, 106, 235

— lactose utilization relation (SCHANTZ, ELVEHJEM, and HART)

1937-38, 122, 381

Muscle and liver, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER)

1934, 104, 519

Fat(s)—continued:

Natural, hexadecenoic acids,
unsaturated linkage, posi-
tion (SPADOLA and RIEMEN-
SCHNEIDER)

1937, 121, 787

—, vitamin B-sparing action
(EVANS, LEPKOVSKY, and
MURPHY) 1934, 107, 439

Neutral, *Lactobacillus acid-*
ophilus (CROWDER and
ANDERSON)

1934, 104, 399

Oxidation system, *Lupinus*
albus (CRAIG)

1936, 114, 727

Phospholipid metabolism,
stomach and intestine, rôle
(FRIES, RUBEN, PERLMAN,
and CHAIKOFF)

1938, 123, 587

Refecation, rôle (WHIPPLE and
CHURCH)

1935, 109, xcviii

Slash-pine growing tips (HALL
and GISVOLD)

1936, 113, 487

-Soluble ester glycerol, lymph,
microdetermination (FREE-
MAN and FRIEDEMANN)

1935, 108, 471

Sterol metabolism, ingestion
effect (ECKSTEIN and
TREADWELL)

1935-36, 112, 373

Vitamin B-sparing action
(EVANS and LEPKOVSKY)

1934, 105, xxvii

1935, 108, 439

— — —, protein and vitamin
G levels, influence (EVANS,
LEPKOVSKY, and MURPHY)

1934, 107, 429

Fat(s)—continued:

Vitamin B, tissue, animal, spar-
ing action (KEMMERER and
STEENBOCK)

1933, 103, 353

— G-sparing action (EVANS,
LEPKOVSKY, and MURPHY)

1934, 107, 443

Fatigue: Acidosis, relation
(MORSE, SCHLUTZ, and
HASTINGS) 1934, 105, lxi

Blood serum acid-base balance,
effect (MORSE and SCHLUTZ)

1935, 109, lxix

Fatty acid(s): Arginine combina-
tion (JUKES and SCHMIDT)

1935, 110, 9

Blood, depancreatized dogs
(LICHTMAN)

1937, 120, 35

—, microdetermination (SMITH
and KIK) 1933, 103, 391

Brominated, fate (TRIPP and
CORLEY) 1934, 105, xciv

—, metabolism (CORLEY,
TRIPP, and NEWTON)

1935, 109, xxiii

Butter fat, isolation and identi-
fication (BOSWORTH and
BROWN) 1933, 103, 115

Catabolism, phlorhizin effect
(CORLEY and LEIGHTY)

1936, 114, xxii

Chrysalis oil (BERGMANN)

1936, 114, 27

Desaturation, deuterium as
indicator (SCHOENHEIMER
and RITTENBERG)

1936, 113, 505

Destruction and synthesis,
deuterium as indicator
(SCHOENHEIMER and RIT-
TENBERG) 1936, 114, 381

Fatty acid(s)—continued:

- Deuterium-containing, preparation (VAN HEYNINGEN, RITTENBERG, and SCHOENHEIMER) 1938, 125, 495
- Deutero, preparation (VAN HEYNINGEN) 1938, 123, lv
- Essential, acrodynia, relation (QUACKENBUSH and STEENBOCK) 1938, 123, xcvi
- Ethyl esters, carotene stability (McDONALD) 1933, 103, 455
- —, glycogen synthesis relation (BUTTS, BLUNDEN, GOODWIN, and DEUEL) 1937, 117, 131
- —, oxidation (DEUEL, HALLMAN, BUTTS, and MURRAY) 1936, 116, 621
- Factor, unsaturated, vitamin B₆, relation (BIRCH) 1938, 124, 775
- Formation from glucose by *Aspergillus niger* (SCHMIDT) 1935, 110, 511
- Glycogen formation, relation (DEUEL, BUTTS, HALLMAN, and CUTLER) 1935-36, 112, 15
- Hydrogenation, deuterium as indicator (RITTENBERG and SCHOENHEIMER) 1937, 117, 485
- Hydroxylated, acetyl values, determination (WEST, HOAGLAND, and CURTIS) 1934, 104, 627
- Isomerism, spectroscopy (KASS, MILLER, and BURR) 1938, 123, lxvi

Fatty acid(s)—continued:

- Lard, and esters, nutritive value (LEPKOVSKY, OUER, and EVANS) 1935, 108, 431
- Lysine combination (JUKES and SCHMIDT) 1935, 110, 9
- Metabolism, intermediary, deuterium as indicator (SCHOENHEIMER) 1937, 119, lxxxvii
- Milk fat, goat (RIEMENSCHNEIDER and ELLIS) 1936, 113, 219
- , goat, distribution, cottonseed meal ingestion effect (RIEMENSCHNEIDER and ELLIS) 1936, 114, 441
- , lecithin-cephalin fraction (KURTZ, JAMIESON, and HOLM) 1934, 106, 717
- Oxidation, phosphate-hydrogen peroxide system, alkaline, mechanism (WITZEMANN) 1934, 107, 475
- Phenylated, fate (TRIPP and CORLEY) 1934, 105, xciv
- Phosphatides, suprarenals, beef (AULT and BROWN) 1934, 107, 607
- Phospholipids (SINCLAIR) 1935, 111, 261
- , muscle (SNIDER) 1936, 116, 503
- , tumor, unsaturation degree (HAVEN) 1935, 109, xlii
- Salmine combination (JUKES and SCHMIDT) 1935, 110, 9

Fatty acid(s)—continued:

Saturated, as energy source,
reproduction and lactation
effect (EVANS, LEPKOVSKY,
and MURPHY)

1934, 106, 441

—, dietary, body fat, effect
(BARBOUR)

1934, 106, 281

—, higher, butter fat (HELZ
and BOSWORTH)

1936, 116, 203

Synthesis and destruction,
deuterium as indicator
(SCHOENHEIMER and RIT-
TENBERG) 1936, 114, 381

Testosterone activation (EH-
RENSTEIN and COREY)

1937-38, 122, 297

Tissues, pregnancy and
lactation, effect (OKEY,
GODFREY, and GILLUM)

1938, 124, 489

Total, blood, adrenalectomy
effect (YEAKEL and
BLANCHARD)

1938, 123, 31

—, liver, yeast-containing
diets, nephrectomy, effect
(HORTENSTINE, CHANUTIN,
and LUDEWIG)

1938, 125, 455

Unsaturated, essential, syn-
thesis, rat (SINCLAIR)

1936, 114, xciv

—, oxidation, blood hemin and
hemochromogens as cata-
lysts (BARRON and LYMAN)

1938, 123, 229

—, tissue phospholipids, selec-
tion and retention (SIN-
CLAIR) 1935, 111, 275

Fatty acid(s)—continued:

Unsaturated, vital need (EVANS,
LEPKOVSKY, and MURPHY)

1934, 106, 431, 441, 445

Volatile, feces, bran pentosan
and crude fiber, influence
(OLMSTED, CURTIS, and
TIMM) 1935, 108, 645

—, soluble, absorption
(HUGHES and WIMMER)

1935, 108, 141

Fatty acid ester: Nutritive value
(COX) 1933, 103, 777

Fatty constituents: Slash-pine
phloem (HALL and GISVOLD)

1935, 109, 585

Feces: Cellulose determination
(WILLIAMS and OLMSTED)

1935, 108, 653

Cholesterol (SCHOENHEIMER)

1934, 105, 355

Crude fiber, determination
(WILLIAMS and OLMSTED)

1935, 108, 653

Fatty acids, volatile, bran
pentosan and crude fiber,
influence (OLMSTED, CURTIS,
and TIMM) 1935, 108, 645

Hemicellulose, non-water-solu-
ble, determination (WIL-
LIAMS and OLMSTED)

1935, 108, 653

Lignin, determination (WIL-
LIAMS and OLMSTED)

1935, 108, 653

Lipids, determination and par-
tition (TIDWELL and HOLT)

1935-36, 112, 605

Nitrogen (SCHNEIDER)

1935, 109, 249

—, dietary fat and carbohy-
drates, effect (MITCHELL)

1934, 105, 537

Feces—continued:

Porphyrin excretion (DOB-
BRINER) 1937, 120, 115

Silkworm, sterols (BERGMANN)
1937, 117, 175

Feedingstuff: Filtrate factor
(JUKES and LEPKOVSKY)

1936, 114, 117

Toxic, protein selenium, re-
moval (PAINTER and
FRANKE) 1935, 111, 643

See also Diet, Food, Nutrition,
Ration

Fermentation: (*See note on*
p. 221)

Dinitroresol effect (KRAHL
and CLOWES)

1935, 111, 355

Iodoacetate and iodoacet-
amide, action (SMYTHE)

1936, 114, xcv

Ferricyanide: Electrode, sugar
determination (SHAFFER
and WILLIAMS)

1935, 111, 707

Oleic acid, oxygen absorption,
catalyst (CHOW and
KAMERLING)

1935, 104, 69

Ferrihemate: Globin-, conjuga-
tion, mechanism (WILLIAMS
and MORRISON)

1938, 123, cxxix

Ferriheme hydroxide-cyanide:
Reaction, mechanism and
equilibrium (HOGNESS,
ZSCHEILE, SIDWELL, and

BARRON) 1937, 118, 1

Ferrihemic acid: Properties
(MORRISON and WILLIAMS)

1938, 123, lxxxvii

Ferrocyanide: Muscle, micro-
determination (EDWARDS
and LANGLEY)

1935-36, 112, 469

Urine, microdetermination (Ed-
WARDS and LANGLEY)

1935-36, 112, 469

Ferrous hydroxide: Autooxida-
tion, active hydrogen forma-
tion (BAUDISCH)

1934, 105, vii

Ferrous sulfate: Starch hydrol-
ysis (BROWN)

1936, 113, 417

Fetus: Human, carotene utiliza-
tion (CLAUSEN and
McCOORD)

1937, 119, xviii

—, composition (GIVENS and
MACY) 1933, 102, 7

Iron (IOB and SWANSON)

1938, 124, 263

Fever: Therapy, blood, venous,
oxygen, effect (ADAMS and
BOOTHBY) 1936, 114, iii

Fibrin: Blood (BERGMANN and
NIEMANN) 1936, 115, 77

Cattle, structure (BERGMANN
and NIEMANN)

1937, 118, 301

Fibrinogen: Blood serum and
plasma (CAMPBELL and
HANNA) 1937, 119, 15

Fibrinolysis: Hemolytic strepto-
coccus (GARNER)

1935, 109, xxxvi

Fibroin: Silk, hydrolysis prod-
ucts (GRANT and LEWIS)

1935, 108, 667

—, structure (BERGMANN and
NIEMANN)

1937-38, 122, 577

Ficin: Crystalline (WALTI)
1937, 119, ci

Fig: Tree, latex, proteolytic
enzyme (ROBBINS and
LAMSON) 1934, 106, 725

Filtrate factor: Feedingstuffs
(JUKES and LEPKOVSKY)
1936, 114, 117

Properties (LEPKOVSKY and
JUKES)

1936, 114, 109, lxi

—, assay, and distribution
(JUKES) 1937, 117, 11

Filtration process: Extremities,
standing effect (KEYS and
BUTT) 1938, 123, lxviii

Fish: Blood (VARs)
1934, 105, 135

— hemoglobin carbon monox-
ide-combining power, acidity
effect (ROOT and GREEN)

1934, 106, 545

Vitamin A (BILLS, McDONALD,
MASSENGALE, IMBODEN,
HALL, HERGERT, and WALL-
ENMEYER) 1935, 109, vii

— D (BILLS, McDONALD,
MASSENGALE, IMBODEN,
HALL, HERGERT, and
WALLENMEYER)

1935, 109, vii

See also Salmon, Trout

Fish liver oil: Concentrates,
irradiated ergosterol and,
hypervitaminoses, compari-
son (MORGAN, KIMMEL, and
HAWKINS) 1937, 119, lxx
1937, 120, 85

See also Cod, Halibut, Sable-fish
liver oils

Flavianates: Organic bases, iden-
tification (LANGLEY and
ALBRECHT) 1935, 108, 729

Flavin(s): -Deficient diets, cata-
ract, casein effect (DAY and
DARBY) 1937, 119, xxii

Hepato-, potentiometry
(STARE)

1935-36, 112, 223

—, preparation and nutritional
value (STARE) 1935, 111, 567

Lacto-, extraction and sta-
bility (BISBEY and SHER-
MAN) 1935-36, 112, 415

—, growth effect (ITTER,
ORENT, and MCCOLLUM)
1935, 108, 579

—, oxidation-reduction poten-
tials (BARRON and HASTINGS)
1934, 105, vii

—, preparation (ITTER, ORENT,
and MCCOLLUM)
1935, 108, 579

—, semiquinone (MICHAELIS
and SCHWARZENBACH)
1938, 123, lxxxiv

—, tissue metabolism, effect
(MUUS, BESSEY, and HAST-
INGS) 1937, 119, lxxii

—, vitamin-free diets, con-
taminant (SUPPLEE, FLAN-
IGAN, HANFORD, and ANS-
BACHER) 1936, 113, 787

Liver, preparation and proper-
ties (STARE)
1935, 109, lxxxviii

Oxidation-reduction, inter-
mediate forms (MICHAELIS
and SCHWARZENBACH)
1938, 123, 527

Potentiometric study (MICH-
AELIS, SCHUBERT, and
SMYTHE) 1936, 116, 587

Ribo-, body fat, effect (Mc-
HENRY and GAVIN)
1938, 125, 653

Flavin(s)—*continued*:

- Ribo-, growth requirement
(DAY and DARBY) 1938, 123, xxviii
- , lactic acid bacteria, growth
effect (SNELL and STRONG)
1938, 123, cxii
- Synthetic, lactic acid bacteria,
growth effect (SNELL and
STRONG) 1938, 123, cxii
- Vitamin B₂, non-identity
(ELVEHJEM and KOEHN)
1935, 108, 709
- Flaxseed**: Mucilage, aldobionic
acid (NIEMANN and LINK)
1934, 104, 205
- Floridin**: Cholesterol activation,
nature (YODER)
1936, 116, 71
- Fluorescein**: Dichloro-, cerebro-
spinal fluid and blood serum
chlorides, microdetermina-
tion (SAIFER and KORN-
BLUM) 1935-36, 112, 117
- Fluorides**: Feeding, bone and
tooth effect (SMITH and
LANTZ) 1933, 101, 677
- Fluorine**: Blood plasma phos-
phatase, effect (SMITH and
LANTZ)
1935-36, 112, 303
- Bone phosphatase, effect
(SMITH and LANTZ)
1935-36, 112, 303
- Dentin, sound and carious
teeth (ARMSTRONG)
1937, 119, v
- Enamel, sound and carious
teeth (ARMSTRONG)
1937, 119, v
- Fed cows, tissues, vitamin C
distribution (PHILLIPS and
STARE) 1934, 104, 351

Fluorine—*continued*:

- Ingestion, milk effect (PHIL-
LIPS, HART, and BOHSTEDT)
1934, 105, 123
- Tooth phosphatase, effect
(SMITH and LANTZ)
1935-36, 112, 303
- Toxicosis, dietary organic con-
stituents, effect (PHILLIPS
and HART)
1935, 109, 657
- Fluorosis**: Chronic, body vitamin
C, influence (PHILLIPS and
CHANG) 1934, 105, 405
- Reducing substances (PHIL-
LIPS, STARE, and ELVEHJEM)
1934, 106, 41
- Tissue respiration (PHILLIPS,
STARE, and ELVEHJEM)
1934, 106, 41
- Folin, Otto**: Obituary, 1934, 107,
preceding p. 607
- Follicle**: Ovarian hormone (MAC-
CORQUODALE, THAYER, and
DOISY) 1935, 109, lviii
- Stimulating hormone, ante-
rior pituitary (WALLEN-
LAWRENCE)
1934, 105, xcvi
- —, urine, women, meno-
pause (BLOCK, BRAND, HAR-
RIS, and HINSIE)
1936, 114, xii
- Food**: Acid-base equilibrium de-
termination (DAVIDSON and
LECLERC) 1935, 108, 337
- Amino acids (CSONKA)
1935, 109, xxv
1936, 114, xxiii
1937, 118, 147
- Ammonolyzed, growth effect
(ROBERTS and HORVITZ)
1938, 123, cii

Food—continued:

- p* - Bromophenylmercapturic acid synthesis, relation (STEKOL) 1937, 118, 155
- Calcium availability (FINCKE and SHERMAN) 1935, 110, 421
- , body calcium, relation (WHITCHER, BOOHER, and SHERMAN) 1936, 115, 679
- Hemoglobin regeneration, factors influencing (ROSE, VAHLTEICH, and MACLEOD) 1934, 104, 217
- Phosphorus, body calcium, relation (WHITCHER, BOOHER, and SHERMAN) 1936, 115, 679
- Trout, brook, calcium and phosphorus, effect (McCAY, TUNISON, CROWELL, and PAUL) 1936, 114, 259
- See also* Diet, Feedingstuff, Nutrition, Ration
- Formaldehyde:** Acidity, formol titration end-point and (LEVY) 1934, 105, 157
- Amino acids, reaction (TOMIYAMA) 1935, 111, 51
- (WADSWORTH and PANGBORN) 1936, 116, 423
- and imino acids, reactions (LEVY and SILBERMAN) 1937, 118, 723
- Ascorbic acid reaction (WEST and NEY) 1937, 119, cii
- Diphtheria toxin, action (PAPENHEIMER) 1938, 125, 201
- Formamide:** Amino acids and, compounds (McMEEKIN) 1936, 114, lxvi

- Formamidine:** Dithio-, cysteine oxidation, sulfenic acid formation (TOENNIES) 1937, 119, xcix
- Formic acid:** Isobutyryl-, ergot alkaloid, precursor (JACOBS and CRAIG) 1937-38, 122, 419
- Nucleic acid hydrolysis, source (STEVENS) 1937, 120, 751
- Formol titration:** Amino acids and peptides, determination (DUNN and LOSHAKOFF) 1936, 113, 359
- Basic amino acids, equilibria (LEVY) 1935, 109, 365
- End-point, formaldehyde acidity and (LEVY) 1934, 105, 157
- Histidine behavior (LEVY) 1934, 105, li
- Fowl:** Blood lipids (LORENZ, ENTENMAN, and CHAIKOFF) 1937-38, 122, 619
- , properties (MORGAN and CHICHESTER) 1935, 110, 285
- sugar, gizzardectomy effect (BURROWS, FRITZ, and TITUS) 1935, 110, 39
- Hemoglobin, spectrophotometric characteristics (KLEIN, HALL, and KING) 1934, 105, 753
- See also* Bird, Chick, Chicken, Creeper fowl, Hen
- Fox-squirrel:** Porphyria (TURNER) 1937, 118, 519
- Fructose:** Blood, determination (ROE) 1934, 107, 15
- Cerebrospinal fluid (HUBBARD and RUSSELL) 1937, 119, 647

Fructose—continued:

Destruction by oxygen, factors influencing (CLINTON and HUBBARD)

1937, 119, 467

Glucose tolerance, normal and depancreatized animals, effect (FLETCHER and WATERS)

1937, 119, xxxiii

Urine, determination (ROE)

1934, 107, 15

Fruit: Carotene, light effect (SMITH and MORGAN)

1933, 101, 43

Vitamin A, light effect (SMITH and MORGAN)

1933, 101, 43

Fullers' earth: Vitamin G concentration (LEPKOVSKY, POPPER, and EVANS)

1935, 108, 257

Fumarate: -Succinate-enzyme, system (STOTZ and HASTINGS)

1937, 118, 479

Fumaric acid: Determination (STOTZ)

1937, 118, 471

Fungus: Lipase, activity (KIRSH)

1935, 108, 421

See also Aspergillus, Gibberella, Mold, Rhizopus

Furanose: Derivatives, pentoses, preparation (LEVENE and COMPTON)

1936, 116, 189

G

Galactonic acid: *l*-, 3,4,5-trimethyl, preparation (TIPSON)

1938, 125, 341

Galactose: Absorption, intestine (CAJORI and KARR)

1935, 109, xiv

Galactose—continued:

Cataract-producing action, protein effect (MITCHELL and COOK)

1938, 123, lxxxvi

d-, dimethyl acetal (CAMPBELL and LINK)

1937-38, 122, 635

—, *d*-galacturonic acid synthesis from (NIEMANN and LINK)

1934, 104, 195

Glycogen formation and retention, effect (DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD)

1933, 101, 301

Heptamethyl 6-glucosido-, methylation (LEVENE, MEYER, and KUNA)

1938, 125, 703

Hexamethyl 6-glucosido-, methylglycoside of, methyl ester of aldobionic acid hexamethyl methylglycoside, relation (LEVENE, MEYER, and KUNA)

1938, 125, 703

Ketolytic action, other sugars, comparison (BUTTS)

1934, 105, 87

l-, *l*-galacturonic acid synthesis from (NIEMANN and LINK)

1934, 104, 743

Lymph, thoracic (FAY and WHARTON)

1935, 109, 695

Respiratory quotient, normal and depancreatized dogs, ingestion effect (ROE, GILMAN, and COWGILL)

1934, 105, lxxii

Tolerance, determination, Folin sugar methods (LOONEY and JELLINEK)

1935, 109, lvii

Galactose-1-phosphoric acid:

Synthesis (COLOWICK)

1938, 124, 557

Galactoside: 2,3,4-Trimethyl α -methyl-*d*-, 2,3,4-trimethyl α -methyl-*d*-galacturonide

methyl ester conversion

(LEVENE and KREIDER)

1937, 121, 155

Galactosuria: Carbohydrate me-
tabolism (MASON)

1934, 105, lviii

Galacturonate: Aldehydo tetra-acetylmethyl-*d*-, synthesis

(CAMPBELL and LINK)

1937, 120, 471

Galacturonic acid: Ascorbic acid

precursor (JOHNSTIN and

POTTER) 1935, 110, 279

d-, α -acetobromo-, methylester, β -methyl-*d*-galactur-

onide, conversion to (MOR-

ELL, BAUR, and LINK)

1935, 110, 719

—, —, —, synthesis (MOR-

ELL, BAUR, and LINK)

1935, 110, 719

—, *p*-bromophenylhydrazine

derivatives (NIEMANN,

SCHOEFFEL, and LINK)

1933, 101, 337

(SELL and LINK)

1938, 125, 235

—, diacetone, methyl ester,

catalytic reduction (LEVENE

and CHRISTMAN)

1937-38, 122, 661

—, esterification and acylation

(MORELL and LINK)

1935, 108, 763

—, *d*-galactose synthesis (NIE-

MANN and LINK)

1934, 104, 195

Galacturonic acid—continued:*d*-, mercaptal, synthesis

(CAMPBELL and LINK)

1937, 120, 471

—, methyl ester, preparation

(SELL and LINK)

1938, 125, 229

—, phenylhydrazine deriva-

tives (NIEMANN, SCHOEFFEL,

and LINK)

1933, 101, 337

—, preparation (MORELL,

BAUR, and LINK)

1934, 105, 15

Determination, Bertrand's

method (KERTESZ)

1935, 108, 127

dl-, resolution (NIEMANN and

LINK)

1934, 106, 773

l-, *l*-galactose synthesis (NIE-

MANN and LINK)

1934, 104, 743

Poly-, methylglycosides, Ehr-

lich's *Pektolsäure* and *Pekto-**lactonsäure* (BAUR and

LINK) 1935, 109, 293

—, — from pectin (MORELL,

BAUR, and LINK)

1934, 105, 1

Galacturonide: α -Methyl-*d*-, and

derivatives, ring structure

(LEVENE and KREIDER)

1937, 120, 597

—, hydrolysis, kinetics (MOR-

ELL and LINK)

1934, 104, 183

 β -Methyl-*d*-, α -acetobromo-*d*-

galacturonic acid methyl

ester, conversion from

(MORELL, BAUR, and LINK)

1935, 110, 719

Poly-, methyl ester, oxidation

and hydrolysis to levo-tar-

Galacturonide—*continued*:

taric acid (LEVENE and KREIDER)

1937, 120, 591

Triacetyl-*d*-, cholesterol, sitosterol, and ergosterol methyl esters, synthesis (SELL and LINK)

1938, 125, 235

2,3,4-Triacetyl α -methyl-*d*-, methyl ester, catalytic reduction and deacetylation (LEVENE and CHRISTMAN)

1937-38, 122, 203

2,3,4-Trimethyl α -methyl-*d*-, methyl ester, catalytic reduction (LEVENE, TIPSON, and KREIDER)

1937-38, 122, 199

— — — — conversion to 2,3,4-trimethyl α -methyl-*d*-galactoside (LEVENE and KREIDER)

1937, 121, 155

Galac yeast: Preparation (KIRBY and ATKIN)

1936, 116, 511

Galleria mellonella: *See* Bee-moth

Gallstones: Hog bile, lithocholic acid (SCHOENHEIMER and JOHNSTON)

1937, 120, 499

Gallus domesticus: *See* Fowl

Gamabufagin: Chemical constitution (JENSEN)

1937, 119, lii

Gas: Analysis, pipette, air-free reagents, storage (GUEST and HOLMES)

1935, 110, 781

—, respiration trials (KLEIBER)

1933, 101, 583

—, Van Slyke, vessels for solution storage (HOLMES)

1936, 113, 411

Gas—*continued*:

Blood analysis, Van Slyke (RAPPAFORT and KÖCK-MOLNAR)

1934, 104, 29

—, determination, blood collection (LOONEY and CHILDS)

1934, 104, 53

—, electrolyte and, equilibrium (VAN SLYKE and SENDROY)

1933, 102, 505

(VAN SLYKE, DILLON, and MARGARIA)

1934, 105, 571

(SENDROY, DILLON, and VAN SLYKE)

1934, 105, 597

—, exercise effect (LOONEY)

1938, 123, lxxvi

Ether-containing, analysis, Haldane apparatus (SNYDER)

1937-38, 122, 21

Solubility, determination (ORCUTT and SEEVERS)

1937, 117, 501

Gastric: *See* Stomach

Gastrointestinal tract: Hydrogen ion concentration determination, glass electrode (EASTMAN and MILLER)

1935, 110, 255

Gelatin: Arsanilic acid and (BOYD and HOOKER)

1934, 104, 329

Chemical constitution (BERGMANN)

1935, 110, 471

Microdetermination (SPENCER, MORGULIS, and WILDER)

1937, 120, 257

Salts and, activity coefficients and membrane equilibrium (JOSEPH)

1936, 116, 353

— —, interaction (JOSEPH)

1936, 114, lv

Gelatin—continued:

Structure (BERGMANN and NIEMANN)

1937, 118, 301

Genital tract: Male hormone, anterior pituitary-like hormone, and fat metabolism hormone, effect (HARROW and NAIMAN)

1934, 105, xxxv

Gentiobiose: Acetyl derivatives, uronic acid methyl esters, molecular rotations, relationship (GOEBEL and REEVES)

1938, 123, xlii

p-Aminophenol β -glycosides, synthesis (BABERS and GOEBEL)

1934, 105, 473

Geronic acid: Formation, carotene and dihydrocarotene ozonization (STRAIN)

1933, 102, 137

Gestation: Calcium requirement (COX and IMBODEN)

1934, 105, xviii

Magnesium requirement, calcium relation (TUFTS and GREENBERG)

1937-38, 122, 715

Phosphorus requirement (COX and IMBODEN)

1934, 105, xviii

Pituitary, anterior, extract, growth hormone, effect (WATTS)

1935, 109, xcv

See also Pregnancy

Gibberella saubinetii: Carbon metabolism on glucose (HESSLER and GORTNER)

1937, 119, 193

Gingiva: Lipids (HODGE)

1933, 101, 55

Girls: Adolescent, mineral metabolism (WANG, KAUCHER, and WING)

1935, 109, xcv

Basal metabolism, preformed and total creatinine nitrogen (WANG)

1937, 119, cii

Gitogenin: (JACOBS and SIMPSON)

1934, 105, 501

Gizzard: Anti-erosion factor, chick, chondroitin effect (BIRD and OLESON)

1938, 123, xi

Factor, chick, distribution and properties (BIRD, ELVEHJEM, and HART)

1936, 114, x

Gliadin: Osmotic pressure, molecular weight, and stability (BURK)

1938, 124, 49

Globin: Amphoteric properties (COHN, SALTER, and FERRY)

1938, 123, xxiv

-Ferrihemate conjugation, mechanism (WILLIAMS and MORRISON)

1938, 123, cxxix

Hemoglobin relation (WILLIAMS and MORRISON)

1937, 119, cv

Iodized, amphoteric properties (COHN, SALTER, and FERRY)

1938, 123, xxiv

Globulin(s): Antipneumococcus serum (GREEN)

1938, 123, xliv

Biological fluids, determination, precipitin method (GOETTSCH and KENDALL)

1935, 109, 221

Blood serum and plasma (CAMPBELL and HANNA)

1937, 119, 15

Globulins—continued:

Blood serum, determination,
angle centrifuge (PRICE,
ROBINSON, and HOGDEN)

1938, 123, xcvi

— —, errors (ROBINSON,
PRICE, and HOGDEN)

1937, 119, lxxxiii

1937, 120, 481

— —, osmotic pressure, molec-
ular weight, and stability
(BURK) 1937, 121, 373

— —, synthetic solution, spe-
cific gravity (NUGENT and
TOWLE) 1934, 104, 395

Crystalline, milk, from albumin
fraction (PALMER)

1934, 104, 359

Jack bean, crystalline, from
canavalin (SUMNER and
HOWELL) 1936, 113, 607

Placenta, immune (GREEN and
McKHANN)

1935, 109, xxxvii

Pseudo-, carbohydrate, nature
(COGHILL and CREIGHTON)

1938, 123, xxiii

Glomerulus: Inulin excretion,
frog and *Necturus* (HEN-
DRIX, WESTFALL, and RICH-
ARDS)

1936, 116, 735

Urine (RICHARDS, BORDLEY,
and WALKER)

1933, 101, 179

—, chloride, frog and *Necturus*
(WESTFALL, FINDLEY, and
RICHARDS)

1934, 107, 661

—, creatinine, frog (BORDLEY,
HENDRIX, and RICHARDS)

1933, 101, 255

—, hydrogen ion concentration
determination, microquinh-

Glomerulus—continued:

drone electrode, *Necturus*
(PIERCE and MONTGOMERY)

1935, 110, 763

Urine, inorganic phosphate,
frog and *Necturus* (WALKER)

1933, 101, 239

—, reaction, frog and *Necturus*
(MONTGOMERY)

1935, 110, 749

—, reducing substances, frog
and *Necturus* (WALKER and
REISINGER)

1933, 101, 223

—, uric acid, snake and frog
(BORDLEY and RICHARDS)

1933, 101, 193

Glucoreductone: 2,6-Dichloro-
phenol indophenol standardi-
zation, ascorbic acid deter-
mination (KERTESZ)

1934, 104, 483

Glucosamine: *d*-, oxidation
(HERBST) 1937, 119, 85

Isolation (CHARGAFF and Bo-
VARNICK) 1937, 118, 421

Glucosaminic acid: *d*-, oxidation
(HERBST) 1937, 119, 85

Hydrogen iodide, reduction
(LEVENE and CHRISTMAN)

1938, 123, 83

Glucose: Absorption, intestine
(CAJORI and KARR)

1935, 109, xiv

—, —, rate (MACKAY and
BERGMAN) 1933, 101, 453

(TRIMBLE and MADDOCK)

1934, 107, 133

—, normal and adrenalectom-
ized rats, sexual variation
(DEUEL, HALLMAN, MUR-
RAY, and SAMUELS)

1937, 119, 607

Glucose—continued:

- Acetoacetic ester and, compounds (MOORE, ERLANGER, and WEST) 1936, 113, 43
- Acetyl derivatives, uronic acid methyl esters, molecular rotations, relationship (GOEBEL and REEVES) 1938, 123, xlii
- β -, preparation (WHISTLER and BUCHANAN) 1938, 125, 557
- Blood changes, swine, ingestion effect (EVELETH) 1934, 104, 559
- 1935, 111, 753
- serum potassium, injection effect (FLOCK, BOLLMAN, MANN, and KENDALL) 1938, 125, 57
- water and electrolyte distribution, intraperitoneal injection effect (ROBINSON and HEGNAUER) 1936, 116, 779
- Carbon metabolism, *Gibberella saubinetii* effect (HESSLER and GORTNER) 1937, 119, 193
- Chloride relationship, blood, insulin effect (CHAIKELIS) 1934, 105, 767
- Containing antigens, artificial, immunological properties (GOEBEL and GOODNER) 1936, 114, xl
- d*-, absorption, stomach (MADDOCK, TRIMBLE, and CAREY) 1933, 103, 285
- , metabolism (DEUEL, HALLMAN, MURRAY, and HILLIARD) 1938, 125, 79

Glucose—continued:

- d*-, sugar acids, preparation from (HART, SHEPPARD, and EVERETT) 1938, 123, lii
- Destruction by oxygen, factors influencing (CLINTON and HUBBARD) 1937, 119, 467
- Dissimilation, mechanism, propionic acid bacteria (WOOD and WERKMAN) 1934, 105, 63
- Duodenum entry rate (KARR, AUSTIN, ABBOTT, and HOFFMAN) 1937, 119, lv
- Excretion, diabetes, exercise effect (CHAMBERS, HIMWICH, and KENNARD) 1935, 108, 217
- Fate, stomach (HOFFMAN, ABBOTT, KARR, and MILLER) 1938, 123, lvii
- Fatty acid formation by *Aspergillus niger* (SCHMIDT) 1935, 110, 511
- Glycogen formation and retention, effect (DEUEL, MAC-KAY, JEWEL, GULICK, and GRUNEWALD) 1933, 101, 301
- Glycogenic and ketolytic action, comparison (SHA-PIRO) 1935, 108, 373
- Ketolytic action, other sugars, comparison (BUTTS) 1934, 105, 87
- Liver, hexoses and trioses, relation (CORI and SHINE) 1936, 114, xxi
- Metabolism, trypanosomes (REINER, SMYTHE, and PEDLOW) 1936, 113, 75

Glucose—continued:

Microdetermination, maltose presence (SOMOGYI)

1937, 119, 741

Oxidation, air, iron pyrophosphate (GOERNER)

1934, 105, 705

Reducing action, physicochemical study (WOOD)

1934, 105, cii

1935, 110, 219

Skin, determination, Hagedorn-Jensen method (PILLSBURY and KULCHAR)

1934, 106, 351

Stomach emptying rate, administration effect (PIERCE, HAEGE, and FROESCHLE)

1937, 119, lxxviii

Tolerance, normal and depancreatized animals, fructose effect (FLETCHER and WATERS)

1937, 119, xxxiii

—, oral and intravenous (KOEHLER and HILL)

1938, 123, lxx

—, vitamin C, relation (SIGAL and KING)

1936, 116, 489

Urine, determination, photoelectric (HOFFMAN)

1937, 120, 51

See also Dextrose

Glucosemonophosphate: Calcium salt, yeast extract, isolation (SMYTHE)

1937, 117, 135

Glucose-4-phosphate: (RAYMOND)

1936, 113, 375

Glucose-1-phosphoric acid: Isolation and synthesis (CORI, CORI, and COLOWICK)

1937, 119, xix

Glucose-1-phosphoric acid—continued:

(CORI, COLOWICK, and CORI)

1937, 121, 465

Tissue, mammalian, extracts, formation (CORI, COLOWICK, and CORI)

1938, 123, 375

Yeast extract, formation (CORI, COLOWICK, and CORI)

1938, 123, 375

Glucose-1-phosphoric ester: Glucose-6-phosphoric ester conversion, enzyme, tissue extracts (CORI, COLOWICK, and CORI)

1938, 124, 543

Glucose-6-phosphoric ester: Glucose-1-phosphoric ester conversion to, enzyme, tissue extracts (CORI, COLOWICK, and CORI)

1938, 124, 543

Glucosidase: α -, specificity (TAUBER and KLEINER)

1934, 105, xci

Glucurone: Diacetylchloro-, synthesis (GOEBEL and BABERS)

1933, 101, 173

Glucuronic acid: Benzoyl-, chemical constitution (GOEBEL)

1937-38, 122, 649

Borneol-, glucuronic acid preparation from (SWARTZ and MILLER)

1933, 103, 651

α -Bromotriacetyl-, methyl ester, preparation (GOEBEL and BABERS)

1935, 111, 347

α -Chlorotriacetyl-, methyl ester, preparation (GOEBEL and BABERS)

1935, 111, 347

1-Chlorotriacetyl-, methyl ester, synthesis (GOEBEL and BABERS)

1934, 106, 63

Glucuronic acid—*continued*:

-Containing antigens, artificial, immunological properties (GOEBEL and GOODNER)
1936, 114, xl

Derivatives (GOEBEL and BABERS) 1933, 101, 173
1935, 110, 707

(HOTCHKISS and GOEBEL)
1936, 115, 285

(GOEBEL and REEVES)
1938, 124, 207

Determination, Bertrand's method (KERTESZ)
1935, 108, 127

l-, synthesis (NIEMANN and LINK) 1934, 106, 773

Preparation, borneolglucuronic acid (SWARTZ and MILLER)
1933, 103, 651

Source (AMBROSE and SHERWIN) 1934, 105, iv

α -Tetraacetyl- and β -tetraacetyl-, methyl ester, synthesis (GOEBEL and BABERS)
1934, 106, 63

Glucuronidase: β - (FISHMAN)
1938, 123, xxxvi

Glucuronide(s): β -, synthesis (GOEBEL and BABERS)
1935, 111, 347

Synthesis (GOEBEL and BABERS) 1935, 110, 707

Glutamic acid(s): Calorigenic action (LUCK and LEWIS)
1934, 105, lv

d-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 119, 247
(BUTTS, DUNN, and BLUNDEN) 1937, 119, xv

dl-, crystalline, anhydrous and monohydrated (DUNN and STODDARD) 1937, 121, 521

Glutamic acid(s)—*continued*:

dl-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 119, 247

(BUTTS, DUNN, and BLUNDEN) 1937, 119, xv

Lysyl-, derivatives, synthesis (GREENSTEIN)
1935, 109, 541

Peptide, physical constants (GREENSTEIN)
1933, 101, 603

dl-Pyro-, fate (BUTTS, BLUNDEN, and DUNN)
1937, 119, 247

-Pyrrolidonecarboxylic acid system (WILSON and CANAN) 1937, 119, 309

Glutamine: Preparation (VICKERY, PUCHER, and CLARK)
1935, 109, 39

Tobacco leaves (VICKERY and PUCHER) 1936, 113, 157

Glutamylcysteinylglycine: α -, synthesis (DU VIGNEAUD, LORING, and MILLER)
1937, 118, 391

Glutathione: Benzylcysteinylglycine isolation from (LORING and DU VIGNEAUD)
1935, 111, 385

Blood, anemia, nutritional (SCHULTZE and ELVEHJEM)
1936, 116, 711

—, schizophrenia (LOONEY and CHILDS)
1934, 105, liii

Bromobenzene-containing diets, growth effect (STEKOL)
1938, 123, cxvi

Catalase inactivation, effect (MARKS) 1936, 115, 299

Glutathione—continued:

- Cystinyldiglycine isolation from (LORING and DU VIGNEAUD) 1935, 111, 385
- Disappearance, biological fluids (OBERST) 1935, 111, 9
- Glycolysis, effect (MORGULIS) 1935, 109, lxviii
1938, 123, 1
- Iso-, synthesis (DU VIGNEAUD, LORING, and MILLER) 1937, 118, 391
- Kidney enzyme, hydrolysis (SCHROEDER and WOODWARD) 1937, 120, 209
- Mercapturic acid synthesis, relation (STEKOL) 1937-38, 122, 333
- Metabolism, cystinuria (BRAND, CAHILL, and HARRIS) 1935, 109, 69
- Microdetermination, glyoxalase in (WOODWARD) 1935, 109, 1
- Naphthalene-containing diets, growth effect (STEKOL) 1938, 123, cxvi
- Oxidation, copper and hemochromogens as catalysts (LYMAN and BARRON) 1937, 121, 275
- Phospho-18-tungstic acid, reaction (SHINOHARA and PADIS) 1935-36, 112, 697
- Reduced and oxidized, blood oxygen capacity and content, relation (OBERST and WOODS) 1935, 111, 1
- Synthesis (DU VIGNEAUD and MILLER) 1936, 116, 469

Glutathione—continued:

- Utilization, cystine-deficient diet (DYER and DU VIGNEAUD) 1936, 115, 543
- X-ray, effect (KINSEY) 1935, 110, 551
- Glutenin:** Cystine (NEGLIA, HESS, and SULLIVAN) 1938, 125, 183
- Glyceric acid:** Diphospho-, blood cells (GUEST and RAPOPORT) 1938, 123, xlvii
- , —, ergosterol, irradiated, effect (GUEST and RAPOPORT) 1938, 124, 599
- Diphospho-*l*-, phosphatase, hydrolysis (BODANSKY and BAKWIN) 1934, 104, 747
- Glyceride(s):** Coffee-bean oil (BENGIS and ANDERSON) 1934, 105, 139
- Hydrolysis, pancreas lipase, crude (BALLS, MATLACK, and TUCKER) 1937-38, 122, 125
- Glycerol:** Ester, fat-soluble, lymph, microdetermination (FREEMAN and FRIEDEMANN) 1935, 108, 471
- Muscle extract, glycogen hydrolysis (CARRUTHERS and LEE) 1935, 108, 525
- Glycerophosphate:** Calcium salt, yeast extract, isolation (SMYTHE) 1937, 117, 135
- Glycine:** Activity, aqueous solution (SMITH and SMITH) 1937, 117, 209
- coefficient, glycine effect (RICHARDS) 1937-38, 122, 727

Glycine—continued:

- Allantoin excretion, administration effect (MARTIN and CORLEY) 1934, 105, lvii
- Anhydride, alkali hydrolysis (SRINIVASAN and SREENIVASAYA) 1934, 105, 563
- Benzylcysteinyl-, crystalline, synthesis and isolation from glutathione (LORING and DU VIGNEAUD) 1935, 111, 385
- Calorigenic action (LEWIS and LUCK) 1933, 103, 227
- Carboxyhemoglobin activity coefficient, effect (RICHARDS) 1937-38, 122, 727
- Creatine precursor (BODANSKY) 1936, 115, 641
- Cystinyl-, crystalline, synthesis and isolation from glutathione (LORING and DU VIGNEAUD) 1935, 111, 385
- , synthesis (WHITE) 1934, 106, 141
- Determination, Van Slyke amino nitrogen manometric method (KENDRICK and HANKE) 1936, 114, lviii
- Diffusion coefficients (MEHL and SCHMIDT) 1936, 114, lxvii
- Dimethyl-, buffer (MICHAELIS and SCHUBERT) 1936, 115, 221
- Egg albumin activity coefficient, effect (RICHARDS) 1937-38, 122, 727
- Fate (BUTTS, DUNN, and HALLMAN) 1935-36, 112, 263

Glycine—continued:

- α -Glutamylcysteinyl-, synthesis (DU VIGNEAUD, LORING, and MILLER) 1937, 118, 391
- Glycyl-, Raman spectrum (EDSALL) 1938, 123, xxxiii
- Growth relation (MCCOY and ROSE) 1937, 117, 581
- Metabolism (BUTTS and DUNN) 1935, 109, xiii
- Metal complex salts, specificity (BERGMANN and FOX) 1935, 109, 317
- Proteins, determination (PATTON) 1935, 108, 267
- Salicylic acid conjugation with (QUICK) 1933, 101, 475
- Solutions, absorption spectra (ANSLOW, FOSTER, and KLINGLER) 1933, 103, 81
- Synthesis, muscle dystrophy, pseudohypertrophic (FREIBERG and WEST) 1933, 101, 449
- , protein metabolism influence (GRIFFITH) 1934, 105, xxxiii
- Uric acid excretion, administration effect (MARTIN and CORLEY) 1934, 105, lvii
- Glycocyamine: Urine (WEBER) 1935, 109, xcvi
- Glycodesoxycholic acid: Synthesis (CORTESE and BAUMAN) 1936, 113, 779
- Glycogen: Body, ovariectomy and theelin administration, effect (GULICK, SAMUELS, and DEUEL) 1934, 105, 29

Glycogen—continued:

Brain, insulin and epinephrine, effect (KERR, HAMPEL, and GHANTUS)

1937, 119, 405

—, isolation (KERR)

1938, 123, 443

—, mammalian, carbohydrate and insulin effect (KERR and GHANTUS)

1936, 116, 9

Determination (SAHYUN)

1933, 103, 203

Formation and retention, glucose, galactose, and lactose effect (DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD)

1933, 101, 301

—, butyric acid ingestion (ECKSTEIN)

1933, 102, 591

—, caproic acid ingestion (ECKSTEIN)

1933, 102, 591

—, fats, relation (DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT)

1937, 117, 119

—, fatty acids, relation (DEUEL, BUTTS, HALLMAN, and CUTLER)

1935-36, 112, 15

—, normal and adrenalectomized rats, sexual variation (DEUEL, HALLMAN, MURRAY, and SAMUELS)

1937, 119, 607

—, propionic acid ingestion (ECKSTEIN)

1933, 102, 591

—, *l*-rhamnose ingestion effect (SILBERMAN and LEWIS)

1933, 101, 741

—, valeric acid ingestion (ECKSTEIN)

1933, 102, 591

Glycogen—continued:

Fractions (CAMPBELL)

1937, 119, xvii

Glucose and carbohydrate intermediates, comparison (SHAPIRO)

1935, 108, 373

Hydrolysis, enzymic and acid, conversion products (SOMOGYI)

1934, 105, lxxxi

—, liver extract (CARRUTHERS)

1935, 108, 535

—, muscle extract (CARRUTHERS)

1935, 108, 535

—, — glycerol extract (CARRUTHERS and LEE)

1935, 108, 525

Hypophysectomy effect (FISHER, RUSSELL, and CORI)

1936, 115, 627

Liver (HRUBETZ and DOTTI)

1934, 107, 731

— and muscle, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER)

1934, 104, 519

—, diurnal changes (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN)

1938, 123, 257

—, low oxygen pressure, effect (EVANS)

1934, 105, xxvi

—, molecular structure (HASID and CHAIKOFF)

1938, 123, 755

—, sexual variation, age effect (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN)

1937, 119, 617

—, water storage, relation (MACKAY and BERGMAN)

1934, 105, 59

(KAPLAN and CHAIKOFF)

1936, 116, 663

Glycogen—continued:

- Muscle, determination
(GUEST) 1938, 123, xlviii
—, fasting effect (BLATHER-
WICK, BRADSHAW, and SAW-
YER) 1936, 114, xii
—, low oxygen pressure, effect
(EVANS) 1934, 105, xxvi
—, resynthesis, hexosemono-
phosphate (CORI, CORI, and
HEGNAUER) 1937, 120, 193
Nerve tissue, determination
(KERR) 1936, 116, 1
Phosphorus- and nitrogen-free,
solubility and preparation
(SOMOGYI) 1934, 104, 245
Phosphorylation, nucleotide
action (CORI, COLOWICK,
and CORI) 1938, 123, 381
Resynthesis, pancreatectomy
(LONG, LUKENS, and FRY)
1934, 105, lii
Synthesis, fatty acids, ethyl
esters, relation (BUTTS,
BLUNDEN, GOODWIN, and
DEUEL) 1937, 117, 131
Glycogenase: Liver, insulin effect
(VOLLMAR and KOEHLER)
1936, 114, cvi
Glycolic acids: Metabolism,
muscular dystrophy, pro-
gressive (MILHORAT and
TOSCANI) 1936, 114, 461
Thio-, oxidation, metal, buffer,
and dithiol, effect (KHA-
RASCH, LEGAULT, WILDER,
and GERARD) 1936, 113, 537
Glycolysis: Blood, mammal, rate
(SOMOGYI) 1933, 103, 665

Glycolysis—continued:

- Blood, purine nucleotide ca-
tabolism, relation (EILER
and ALLEN) 1938, 123, 655
Brain, anaerobic (QUASTEL and
WHEATLEY) 1937, 119, lxxx
Glutathione effect (MORGULIS)
1935, 109, lxxviii
1938, 123, 1
Glycoproteins(s): (MEYER and
PALMER) 1936, 114, 689
(MEYER, SMYTH, and
PALMER) 1937, 119, 73
(PALMER, SMYTH, and
MEYER) 1937, 119, 491
(MEYER, PALMER, and
SMYTH) 1937, 119, 501
(MEYER and SMYTH)
1937, 119, 507
Classification, new (MEYER
and PALMER) 1936, 114, lxxviii
Glycoside(s): β -, *p*-aminophenol,
maltose, lactose, cellobiose,
and gentiobiose, synthesis
(BABERS and GOEBEL)
1934, 105, 473
Differentiation, bromine action
(SHEPPARD and EVERETT)
1936, 114, xci
Hexamethyl methyl-, methyl
ester, aldobionic acid, cata-
lytic reduction to methyl-
glycoside of hexamethyl 6-
glucosidogalactose (LEVENE,
MEYER, and KUNA) 1938, 125, 703
Methyl-, hexuronic acids,
naturally occurring (MORELL
and LINK) 1934, 104, 183

Glycoside(s)—*continued*:

(MORELL, BAUR, and LINK)

1934, 105, 1

(BAUR and LINK)

1935, 109, 293

Methyl-, polygalacturonic acid-,
Ehrlich's *Pektolsäure* and
Pektolactonsäure (BAUR and
LINK) 1935, 109, 293—, —, pectin (MORELL,
BAUR, and LINK)

1934, 105, 1

Glycyl- α -aminotricarballylic acid:Dissociation constants, ap-
parent (GREENSTEIN and
JOSEPH) 1935, 110, 619**Glycylcysteic acid:** Preparation

(WHITE) 1933, 102, 249

Glycylglycine: Raman spectrum

(EDSALL)

1938, 123, xxxiii

Glycyltaurine: Preparation

(WHITE) 1933, 102, 249

Glyoxal: Methyl-, thiol acids,
combination (SCHUBERT)

1935, 111, 671

Glyoxalase: Anti-, kidney(SCHROEDER, MUNRO, and
WEIL) 1935, 110, 181—, — and pancreas (WOOD-
WARD, MUNRO, and
SCHROEDER)

1935, 109, 11

Determination, manometric
(PLATT and SCHROEDER)

1934, 104, 281

Glutathione microdetermina-
tion, reagent (WOODWARD)

1935, 109, 1

Tissue, normal and cancerous
(PLATT and SCHROEDER)

1934, 106, 179

Goat: Blood phosphate, inor-
ganic (CUTLER)

1934, 106, 653

— sugar (CUTLER)

1934, 106, 653

Milk fat fatty acids (RIEMEN-
SCHNEIDER and ELLIS)

1936, 113, 219

— fatty acids, distribution,
cottonseed meal ingestion
effect (RIEMENSCHNEIDER
and ELLIS) 1936, 114, 441**Goiter:** Iodide administration,
effect (REMINGTON and
LASSEK) 1937, 119, lxxxiiIodine and, in Far East
(McCLENDON)

1933, 102, 91

Thyroglobulin iodine and
thyroxine (CAVETT, RICE,
and McCLENDON)

1935, 110, 673

— nitrogen distribution, tyro-
sine and tryptophane
(CAVETT) 1936, 114, 65**Gonadotropic extracts:** Urine,
pregnancy, tungstic acid
precipitation, preparation
(KATZMAN and DOISY)

1934, 107, 513

Gonadotropic hormone: Blood,
pregnancy, preparation
(GUSTUS, MEYER, and
WOODS) 1936, 114, 59— serum, pregnancy, chem-
istry (BISCHOFF)

1938, 125, 697

—, —, preparation and
purification (CARTLAND and
NELSON) 1937, 119, 59Pituitary, chemistry (MAX-
WELL and BISCHOFF)

1935-36, 112, 215

Gonadotropic hormone—continued:

Urine, pregnancy (GURIN, BACHMAN, and WILSON)

1938, 123, xlix

Gonadotropic substance: Determination (KATZMAN and DOISY)

1934, 105, xliv

1934, 106, 125

Urine, castrates, female (LEVIN and TYNDALE)

1935, 109, liv

Gonococci: Pyruvic acid oxidation, effect (BARRON)

1936, 113, 695

Gossypol: Calcium and, reaction, physiological significance (GALLUP and REDER)

1935, 109, xxxvi

Grape: Pomace, ether-soluble and petroleum ether-soluble constituents (MARKLEY, SANDO, and HENDRICKS)

1938, 123, 641

Grapefruit: Peel oil wax-like constituents (MARKLEY, NELSON, and SHERMAN)

1937, 118, 433

Pink, pigments (MATLACK)

1935, 110, 249

Grignard reagent: Cardiac aglycones, lactone group, effect (JACOBS and ELDERFIELD)

1936, 114, 597

Growth: Alanine relation (GUNTHER and ROSE)

1938, 123, 39

Alcohol-extracted animal tissues, effect (SEEGERs and MATTILL)

1934, 105, lxxvii

Growth—continued:

Amino acid isomerism, optical, effect (TOTTER and BERG)

1938, 123, cxxii

dl-Amino-N-methylhistidine availability (FISHMAN and WHITE)

1936, 113, 175

d-Amino-N-methyltryptophane effect (GORDON)

1938, 123, xliii

dl-Amino-N-methyltryptophane effect (GORDON)

1938, 123, xliii

Ammonolyzed foods, effect (ROBERTS and HORVITZ)

1938, 123, cii

Avocado-rich diet, influence (McAMIS and SWEET)

1936, 114, lxiv

Body magnesium relation (GREENBERG and TUFTS)

1936, 114, 135

Bromobenzene, dietary, effect (STEKOL)

1937-38, 122, 55

Calcium and phosphorus intake levels, effect (TOEPFER and SHERMAN)

1936, 115, 685

Creatine-creatinine production, dietary arginine effect (MEYER and ROSE)

1933, 102, 461

Cystamine with cystine and methionine inadequacy, relation (JACKSON and BLOCK)

1936, 113, 135

Cystine-deficient diet, meso-cystine effect (LORING, DORFMAN, and DU VIGNEAUD)

1933, 103, 399

Growth—continued:

Cystine derivatives, effect
(JONES, ANDREWS, and
ANDREWS)

1935, 109, xlvii

— relation (WOMACK, KEM-
MERER, and ROSE)

1937, 121, 403

— utilization, bromobenzene
effect (WHITE and JACKSON)

1935, 111, 507

dl-Cystine metabolism, dietary
protein, effect (STEKOL)

1934, 107, 641

l-Cystine, dietary, effect
(STEKOL)

1937-38, 122, 55

— metabolism, dietary pro-
tein, effect (STEKOL)

1934, 107, 641

Deficiency disease, wheat germ
oil effect (BLUMBERG)

1935, 108, 227

Di-N-methylhomocystine, cys-
tine-deficient diet, relation
(PATTERSON, DYER, and DU
VIGNEAUD)

1936, 116, 277

Embryo, chemistry (WILKER-
SON)

1934, 104, 541

Essential, proteins, properties
(CALDWELL and ROSE)

1934, 107, 57

—, unknown, nature (WOMACK
and ROSE)

1935-36, 112, 275

S-Ethylhomocysteine avail-
ability (DYER)

1938, 124, 519

Factor, chick, arginine relation
(ARNOLD, KLINE, ELVEHJEM,
and HART)

1936, 116, 699

Growth—continued:

Factor, liver (KLINE, ELVE-
HJEM, KEENAN, and HART)

1934, 107, 107

—, new, chick (STOKSTAD and
MANNING)

1938, 125, 687

Factors, *Escherichia coli*, effect
(SAHYUN)

1935, 109, lxxviii

—, pathogens, effect (SAHYUN)

1935, 109, lxxviii

Glutathione, bromobenzene-
and naphthalene-containing
diets, effect (STEKOL)

1938, 123, cxvi

Glycine relation (McCoy and
ROSE)

1937, 117, 581

d-Histidine, effect (Cox and
BERG)

1934, 107, 497

l-Histidine, effect (Cox and
BERG)

1934, 107, 497

d-Homocystine, effect (DYER
and DU VIGNEAUD)

1935, 109, 477

l-Homocystine, effect (DYER
and DU VIGNEAUD)

1935, 109, 477

Homomethionine effect (DYER
and DU VIGNEAUD)

1935, 108, 73

Hormone, pituitary, anterior,
extract, gestation and weight
of new-born, effect (WATTS)

1935, 109, xcv

—, plant, *Rhizopus suinus*
(THIMANN)

1935, 109, 279

Isobarbituric acid metabolism,
effect (CERECEDO and
STEKOL)

1934, 107, 425

Isoleucine relation (WOMACK
and ROSE)

1936, 116, 381

Growth—continued:

- Lactoflavin effect (ITTER, ORENT, and McCOLLUM)
1935, 108, 579
- Leucine relation (WOMACK and ROSE)
1936, 116, 381
- d*-Lysine and (HAMMETT)
1937, 119, xlv
- Magnesium requirement, calcium relation (TUFTS and GREENBERG)
1937-38, 122, 715
- Metabolism (STEKOL and CERECEDO)
1934, 105, lxxxv
- Methionine relation (WOMACK, KEMMERER, and ROSE)
1937, 121, 403
(HEARD and LEWIS)
1938, 123, 203
- utilization, bromobenzene effect (WHITE and JACKSON)
1935, 111, 507
- d*-Methionine and formyl derivatives, effect (JACKSON and BLOCK)
1937-38, 122, 425
- dl*-Methionine metabolism, dietary protein, effect (STEKOL)
1935, 109, 147
- l*-Methionine and formyl derivatives, effect (JACKSON and BLOCK)
1937-38, 122, 425
- metabolism, dietary protein, effect (STEKOL)
1935, 109, 147
- N*-Methylmethionine, cystine-deficient diet, relation (PATTERSON, DYER, and DU VIGNEAUD)
1936, 116, 277

Growth—continued:

- α -*N*-Monomethyllysine and α -*N*-dimethyllysine, availability (GORDON)
1937, 119, xxxvii
- Naphthalene in diet, effect (STEKOL)
1937, 121, 87
- metabolism (STEKOL)
1935, 110, 463
- Norleucine relation (WOMACK and ROSE)
1936, 116, 381
- Pentocystine effect (DYER and DU VIGNEAUD)
1935, 108, 73
- Phenylalanine relation (WOMACK and ROSE)
1934, 107, 449
- Preparation, pituitary, anterior, protein metabolism, effect (GAEBLER and PRICE)
1937, 121, 497
- , —, —, sulfur metabolism, effect (GAEBLER and PRICE)
1936, 114, xxxix
- Promoting factor, chick (JUKES and BABCOCK)
1938, 125, 169
- , —, vitamin B, whole wheat (HALLIDAY)
1934, 106, 29
- pituitary extract, thiamine deficiency, effect (BURKE and MCINTYRE)
1938, 123, xvii
- properties, homocystine, cystine-deficient diet (DU VIGNEAUD, DYER, and HARMON)
1933, 101, 719
- , —, vitamin G concentrates (BOOHER, BLODGETT, and PAGE)
1934, 107, 599
- Protein intake, relation (CONNER and SHERMAN)
1936, 115, 695

Growth—continued:

- Pyrimidine metabolism (SILVER and CERECEDO)
1936, 114, xciii
- Riboflavin requirement (DAY and DARBY)
1938, 123, xxviii
- Serine relation (McCoy and ROSE)
1937, 117, 581
- Sulfur-containing amino acids, effect (BRAND)
1938, 123, xv
- Trout, brook, calcium and phosphorus, effect (McCAY, TUNISON, CROWELL, and PAUL)
1936, 114, 259
- Tryptophane carbonic acid derivative, relation (BAUGUESS and BERG)
1936, 114, 253
- Tryptophane-deficient diets, various indole acid supplements, effect (BAUGUESS and BERG)
1934, 104, 675
- Tryptophane, optical activity influence (BERG)
1934, 104, 373
- l*-Tryptophane amides, effect (BAUGUESS and BERG)
1934, 106, 615
- Tyrosine relation (WOMACK and ROSE)
1934, 107, 449
- Vitamin B₁, composition, effect (WHIPPLE and CHURCH)
1936, 114, cvii
- — requirements, diet fat relation (STIRN and ARNOLD)
1938, 123, cxvii
- E relation (OLCOTT and MATTILL)
1936, 114, lxxvii

Growth—continued:

- Water and electrolytes, brain, liver, and muscle, effect (YANNET and DARROW)
1938, 123, 295
- Yeast alcohol extract, relation (RYMER and LEWIS)
1936, 114, 361
- Guanidine: Derivatives, muscle dystrophies, relation (SULLIVAN)
1935, 109, lxxxix
- , urine, muscle dystrophies (SULLIVAN, HESS, and IRREVERRE)
1936, 114, 633
- Like substance, blood, ura-nium nephritis (WEBER)
1938, 123, cxxiv
- substances, urine, determination, colorimetric (ANDES and MYERS)
1937, 118, 137
- Muscle dystrophies, relation (SULLIVAN)
1935, 109, lxxxix
- Test, colorimetric, Sullivan (BRAUN and REES)
1936, 114, 415
- (SULLIVAN)
1936, 116, 233
- Guanidino compounds: Non-enzymatic hydrolysis (HELMERMAN and STOCK)
1938, 125, 771
- Guanidoacetic acid: Creatine precursor (BODANSKY)
1936, 115, 641
- Excretion (BODANSKY, DUFF, and HERRMANN)
1937, 119, xiii
- Metabolism (WEBER)
1936, 114, cvii

Guanine: Fate, dog (ALLEN and CERECEDO)

1933, 102, 313

Guanosine: Fate, dog (CERECEDO and ALLEN)

1934, 107, 421

Gulomethylose: *d*-, crystalline, and derivatives (LEVENE and COMPTON)

1935, 111, 335

Gum: Lemon tree (ANDERSON, RUSSELL, and SEIGLE)

1936, 113, 683

Gum arabic: Aldobionic acid glycosidic union, configuration (LEVENE and TIPSON)

1938, 125, 355

— —, hexamethyl methylglycoside methyl ester, catalytic reduction to methylglycoside of hexamethyl 6-glucosidogalactose (LEVENE, MEYER, and KUNA) 1938, 125, 703

— —, transformation to disaccharide (LEVENE and TIPSON) 1938, 125, 345

H

Hagedorn-Jensen: Skin glucose, determination (PILLSBURY and KULCHAR)

1934, 106, 351

Hair: Amino acids, cow and chimpanzee (BLOCK and LEWIS) 1938, 125, 561

Cystine, cystinuria (LEWIS and FRAYSER) 1935, 110, 23

—, stone cystine, identity (LORING and DU VIGNEAUD)

1934, 107, 267

Hydrolysis (ANDREWS)

1936, 114, iii

Hair—continued:

Isoelectric point (WILKERSON) 1935–36, 112, 329

Methionine, dietary, effect (HEARD and LEWIS)

1938, 123, 203

Sterol, dietary fat, effect (ECKSTEIN)

1938, 125, 107

Haldane: Apparatus, ether-containing gases, analysis (SNYDER)

1937–38, 122, 21

Halibut liver oil: Vitamins A and D, potency, seasonal variation (BILLS, IMBODEN, and WALLENMEYER)

1934, 105, x

Halibut viscera oil: Vitamins A and D (PUGSLEY)

1938, 123, xcvi

Halide(s): Alkyl, 2-halogeno acids, configurational relationship (LEVENE and ROTHEN) 1937, 119, 189

Body fluids, distribution, chronic bromide intoxication (MASON) 1936, 113, 61

Halogeno acids: 2-, alkyl halides, configurational relationship (LEVENE and ROTHEN)

1937, 119, 189

Han-fang-chi: Alkaloids (CHEN and CHEN)

1935, 109, 681

Hatching: Blood hemoglobin, effect (HOLMES, PIGOTT, and CAMPBELL)

1934, 105, xli

Hay: Alfalfa, carotene, vitamin A activity, relation (HARTMAN, KANE, and SHINN)

1934, 105, xxxvi

Hay—*continued*:

Carotene determination (WISEMAN, KANE, and CARY)

1934, 105, ci

— storage effect (KANE and SHINN) 1935, 109, xlviii

See also Alfalfa

Heart: Cardiac aglycones (JACOBS and ELDERFIELD)

1935, 108, 497

— —, lactone group, Grignard reagent effect (JACOBS and ELDERFIELD)

1936, 114, 597

Creatine, thyroid and thyroxine effect (BODANSKY)

1935, 109, 615

Hypertrophy, lipid phosphorus (LUDEWIG and CHANUTIN)

1936, 115, 327

See also Muscle

Heat: Dissipation, heat production, comparison (JOHNSON and NEWBURGH)

1935, 109, xlv

Liver proteins, effect (SEEGERS and MATTILL)

1935, 110, 531

Tissue nutrients, effect (SEEGERS) 1935, 109, lxxx

Helium: Solubility, blood (HAWKINS and SHILLING)

1936, 113, 649

Hemagglutinin: Jack bean, inactivation, reversible, divalent metals, relation (SUMNER and HOWELL)

1936, 115, 583

Hematin: Reduced, carbon monoxide absorption (CLIFCORN, MELOCHE, and ELVEHJEM)

1935, 111, 399

Hematocrit: Blood adenine nucleotide relation (BUELL)

1935, 109, xii

Hematopoiesis: Dietary calcium, phosphorus, and iron, effect (DAY, STEIN, and MCCOLLUM)

1938, 123, xxviii

Reticulocyte, index (ORTEN)

1938, 123, lxxxix

Hematopoietic substance: Liver, chemistry (DAKIN and WEST) 1935, 109, 489 (DAKIN, UNGLEY, and WEST) 1936, 115, 771

Hematoporphyrin: Enzyme action (BOYD)

1933, 103, 249

Fate, parenteral administration (SMETANA)

1938, 125, 741

Hemicellulose(s): Mesquite wood (SANDS and GARY)

1933, 101, 573

(SANDS and NUTTER)

1935, 110, 17

Non-water-soluble, feces, determination (WILLIAMS and OLMSTED)

1935, 108, 653

Oat hulls (ANDERSON and KRZNARICH)

1935, 111, 549

Hemin: Acid properties (MORRISON and WILLIAMS)

1938, 123, lxxxvii

Blood fatty acids, unsaturated oxidation, catalyst (BARRON and LYMAN)

1938, 123, 229

—, oxidation-reduction potentials (BARRON)

1937, 121, 285

Hemin—continued:

Fate, alimentary (BING, BENES, and REMP)

1936, 114, x

Spirographis, oxidation-reduction potentials (BARRON)

1937, 119, vi

Hemochromogen(s): Ascorbic acid oxidation catalyst (BARRON, DEMEIO, and KLEMPERER)

1935-36, 112, 625

Blood, fatty acids, unsaturated, oxidation, catalysts (BARRON and LYMAN)

1938, 123, 229

—, oxidation-reduction potentials (BARRON)

1937, 121, 285

Cyanide (HOGNESS, ZSCHEILE, SIDWELL, and BARRON)

1937, 118, 1

—, oxidation-reduction potentials (BARRON and HASTINGS)

1935, 109, iv

Equilibria (DRABKIN)

1938, 123, xxxi

Glutathione oxidation, catalyst (LYMAN and BARRON)

1937, 121, 275

Pyridine, carbon monoxide absorption (CLIFCORN, MELOCHE, and ELVEHJEM)

1935, 111, 399

Spectrophotometry (DRABKIN and AUSTIN)

1935-36, 112, 89

Spirographis, oxidation-reduction potentials (BARRON)

1937, 119, vi

Hemocyanin: Carbon monoxide combination (ROOT)

1934, 104, 239

Hemocyanin—continued:

Equilibrium, acids and bases, oxygenation and reduction, effect (SHACK)

1935, 109, 383

Limulus polyphemus, cyanide reaction (PEARSON)

1936, 115, 171

— —, sulfur distribution and basic amino acids (MAZUR)

1937, 118, 631

Oxidation (CONANT, CHOW, and SCHOENBACH)

1933, 101, 463

Prosthetic group, *Limulus* (CONANT, DERSCH, and MYDANS)

1934, 107, 755

Hemoglobin: Absorption spectra (DRABKIN)

1936, 114, xxvii

Adsorbed, isoelectric point (WHITE and MONAGHAN)

1936, 113, 371

Amide solutions, properties (STEINHARDT)

1938, 123, 543

Blood adenine nucleotide relation (BUELL)

1935, 109, xii

—, beef, spectrophotometric characteristics (SHENK, HALL, and KING)

1934, 105, 741

—, carbon monoxide-combining power, fish, acidity effect (ROOT and GREEN)

1934, 106, 545

—, chicken (HOLMES, FIGOTT, and CAMPBELL)

1933, 103, 657

—, —, determination (SCHULTZE and ELVEHJEM)

1934, 105, 253

Hemoglobin—continued:

- Blood, chicken, hatching effect
(HOLMES, PIGOTT, and CAMPBELL) 1934, 105, xli
- cholesterol relation
(SCHWARZ and LICHTENBERG) 1937, 121, 315
- Building, protein relation
(PEARSON, ELVEHJEM, and HART) 1937, 119, 749
- Carbamate-carbon dioxide equilibrium, blood carbon dioxide transport, relation
(STADIE and O'BRIEN) 1935, 109, lxxxvii
- Carbon dioxide combination, carbonic acid dissociation constant, first, relation
(MARGARIA and GREEN) 1933, 102, 611
- monoxide capacity (MORRISON and HISEY) 1935, 109, 233
- — union (ADAMS) 1934, 105, iii
- Cattle, structure (BERGMANN and NIEMANN) 1937, 118, 301
- Crystalline, mammalian, basic amino acids (BLOCK) 1934, 105, 663
- Derivatives, absorption spectra (DRABKIN) 1937, 119, xxvi
- , nitrite reactions (BARNARD) 1937, 120, 177
- , nomenclature (DRABKIN) 1938, 123, xxxi
- Determination (HEINLE and BING) 1933, 101, 369
- Dried, denaturation, oxygen (HISEY) 1938, 123, lvi
- , oxygen uptake (HISEY) 1937, 119, xlix

Hemoglobin—continued:

- Dried, preparation and properties (MORRISON and HISEY) 1936, 114, lxxiii
- Embryo, formation (SCHÖNHEYDER) 1938, 123, 491
- Fate, intravenous injection (DRABKIN, WIDERMAN, and LANDOW) 1935, 109, xxvii
- Formation, copper supplement to iron (SCHULTZE, ELVEHJEM, and HART) 1934, 106, 735
1936, 115, 453
- , egg yolk iron and copper, influence (SHERMAN, ELVEHJEM, and HART) 1934, 107, 289
- , iron, availability (ELVEHJEM, HART, and SHERMAN) 1933, 103, 61
- , pregnancy, diet influence (KYER and BETHELL) 1936, 114, lx
- Fowl, spectrophotometric characteristics (KLEIN, HALL, and KING) 1934, 105, 753
- Globin displacement by pyridine (WILLIAMS and MORRISON) 1937, 119, cv
- Iron (MORRISON and HISEY) 1935, 109, 233
- Men, healthy (NELSON and STOKER) 1936, 114, lxxvi
- Methemoglobin reduction, methylene blue (WENDEL) 1938, 123, cxxiv
- Muscle, beef, spectrophotometric characteristics (SHENK, HALL, and KING) 1934, 105, 741

Hemoglobin—continued:

- New formed, anemia (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1935, 108, 487
 — —, protein catabolism and (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1933, 103, 495
 Nitric oxide, spectrophotometry (DRABKIN and AUSTIN) 1935-36, 112, 51
 Nitrogen, total (MORRISON and HISEY) 1935, 109, 233
 Oxygen affinity, altitude effect (HALL) 1936, 115, 485
 -Oxygen equilibrium, salt effect (SIDWELL, MUNCH, BARRON, and HOGNESS) 1938, 123, 335
 — union (ADAMS) 1934, 105, iii
 Oxygenated, titration curves (GERMAN and WYMAN) 1937, 117, 533
 Preparation (MORRISON and HISEY) 1937, 117, 693
 Production (FITZ-HUGH, ROBSON, and DRABKIN) 1933, 103, 617
 —, anemia, nitrogen metabolism, liver function injury by chloroform, relation (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1936, 113, 391
 —, —, nutritional, milk low in copper, iron and copper metabolism (BING, SAURWEIN, and MYERS) 1934, 105, 343
 Reduced, carbamate equilibrium (STADIE and O'BRIEN) 1937, 117, 439

Hemoglobin—continued:

- Reduced, titration curves (GERMAN and WYMAN) 1937, 117, 533
 Regeneration, anemia, copper and iron, effect (SMITH and OTIS) 1937, 119, xcii
 —, eggs, cereals, beef liver and muscle, comparison (ROSE, VAHLTEICH, and MACLEOD) 1934, 104, 217
 Salt solutions, solubility (GREEN, COHN, and BLANCHARD) 1935, 109, 631
 Solution, carbonic acid dissociation constant, first, hemoglobin and carbon dioxide, relation (MARGARIA and GREEN) 1933, 102, 611
 —, concentrated, spectrophotometric technique (DRABKIN and AUSTIN) 1935-36, 112, 105
 Solutions, hydrogen ion concentration determination, errors (DILL, FORBES, and HENDERSON) 1935, 109, xxvii
 —, methemoglobin determination (MICHEL) 1937, 119, lxi
 Urea solutions, molecular weight and volume (HAND) 1935, 109, xl
 — —, properties (STEINHARDT) 1938, 123, 543
See also Carboxyhemoglobin, Methemoglobin, Oxyhemoglobin
Hemolysin: Pneumococcal, inactivation, metal compounds, effect (SHWACHMAN, HELLERMAN, and COHEN) 1934, 107, 257

Hemolysin—continued:

Pneumococcal, inactivation, oxidation and reduction, effect (SEWACHMAN, HELLERMAN, and COHEN) 1934, 107, 257

Hemolysis: Bile acids and sterols, effect (BERLINER)

1937, 119, xi

— — —, structure relation (BERLINER and SCHOENHEIMER) 1938, 124, 525

Post-, residue, blood cell, red, lipid partition (ERICKSON, WILLIAMS, BERNSTEIN, and JONES) 1936, 114, xxxii

—, —, — —, red, preparation (ERICKSON, JONES, BERNSTEIN, WILLIAMS, LEE, and MACY) 1936, 114, xxxii

Hemophilia: Prothrombin (QUICK) 1935, 109, lxxiii

Hemophilus parainfluenzae: Co-enzyme stability (KOHN)

1938, 123, lxxi

Hemorrhage: Anti-, factor, biological assay (THAYER, MACCORQUODALE, MCKEE, and DOISY) 1938, 123, cxx

—, vitamin (ALMQUIST)

1937, 120, 635

—, —, properties (ALMQUIST)

1937, 117, 517

(KLOSE, ALMQUIST, and MECCHI) 1938, 125, 681

—, —, purification (ALMQUIST)

1936, 114, 241

1936, 115, 589

Blood lipid regeneration, effect (BOYD and STEVENSON)

1937-38, 122, 147

Chick disease, diet relation (ALMQUIST and STOKSTAD)

1935, 111, 105

Hen: Blood composition (HELLER and PURSELL)

1937, 118, 549

See also Bird, Chick, Chicken, Fowl

Henderson-Hasselbalch: Equation, blood serum, apparent dissociation constant, value (ROBINSON, PRICE, and CULLEN) 1934, 106, 7

—, urine, application (SENDROY, SEELIG, and VAN SLYKE) 1934, 106, 463

Heparin: Blood antithrombin, relation (QUICK)

1937, 119, lxxxii

— coagulation, action (CHARGAFF and OLSON)

1937-38, 122, 153

— plasma phospholipid, effect (SCHMIDT)

1935, 109, 449

— — sugar, effect (NEUWIRTH)

1937, 120, 463

— serum and plasma cholesterol, effect (SPERRY and SCHOENHEIMER)

1935, 110, 655

Chemistry (ASTRUP and JENSEN) 1938, 124, 309

Preparation (CHARLES and SCOTT) 1933, 102, 425

Purification (SCOTT and CHARLES) 1933, 102, 437

Structure (JORGES and BERGSTRÖM) 1937, 118, 447

Tissue (CHARLES and SCOTT)

1933, 102, 431

Hepatectomy: Blood plasma proteins, effect (CHANUTIN, HORTENSTINE, COLE, and LUDEWIG)

1938, 123, 247

Hepatectomy—continued:

Nitrogen, non-protein, metabolism, Dalmatian dog (TRIMBLE and MADDOCK)

1938, 123, cxxiii

Partial, blood plasma cholesterol and phospholipid phosphorus, effect (CHANUTIN and LUDEWIG)

1936, 115, 1

Hepatoflavin: Potentiometry (STARE)

1935-36, 112, 223

Preparation and nutritional value (STARE)

1935, 111, 567

Heptamethyl 6-glucosidogalactose: Methylation (LEVENE, MEYER, and KUNA)

1938, 125, 703

Heptane: 3-Amino-, norleucine, configurational relationship (LEVENE and KUNA)

1937-38, 122, 291

Heptoses: Metabolism (ROE)

1937, 119, lxxxiv

Physiological availability (ROE and HUDSON)

1937, 121, 37

Hexadecenoic acids: Natural fats, unsaturated linkage, position (SPADOLA and RIEMENSCHNEIDER)

1937, 121, 787

Hexamethyl 6-glucosidogalactose: Methylglycoside of, methyl ester of aldobionic acid hexamethyl methylglycoside, relation (LEVENE, MEYER, and KUNA)

1938, 125, 703

Hexamethyl methylglycoside: Methyl ester, aldobionic

acid, catalytic reduction to methylglycoside of hexamethyl 6-glucosidogalactose (LEVENE, MEYER, and KUNA)

1938, 125, 703

Hexane: 2-Amino-, norleucine, configurational correlation (LEVENE and MARDASHEW)

1937, 117, 707

Hexocystine: Synthesis and physiological availability (JONES and DU VIGNEAUD)

1937, 120, 11

Hexomethionine: Synthesis and physiological availability (JONES and DU VIGNEAUD)

1937, 120, 11

Hexosamine(s): Determination (PALMER, SMYTH, and MEYER)

1937, 119, 491

Oxidation (HERBST)

1937, 119, 85

Hexose(s): Liver glucose, relation (CORI and SHINE)

1936, 114, xxi

Uronic acid conversion (LEVENE and KREIDER)

1937, 121, 155

(LEVENE, TIPSON, and KREIDER)

1937-38, 122, 199

(LEVENE and CHRISTMAN)

1937-38, 122, 203, 661

(LEVENE and TIPSON)

1938, 125, 345, 355

(LEVENE, MEYER, and KUNA)

1938, 125, 703

Hexosemonophosphate(s): (RAYMOND)

1936, 113, 375

Muscle, disappearance (CORI and CORI)

1934, 107, 5

—, frog (CORI and CORI)

1934, 105, xvii

Hexosemonophosphate(s)—*continued*:

Muscle glycogen resynthesis
from (CORI, CORI, and HEG-
NAUER) 1937, 120, 193

Yeast extract, preparation
(MICHAELIS and SMYTHE)
1936, 114, lxx
(SMYTHE) 1937, 118, 619

Hexosephosphate: Esters, for-
mation, muscle, frog (CORI
and CORI)

1936, 116, 119

Muscle, frog, disappearance
(RONZONI and KERLY)
1933, 103, 175

Hexoxidase: Complement func-
tion, effect (ECKER, PILLE-
MER, MARTIENSEN, and
WERTHEIMER)

1938, 123, 359

Hexuronic acid(s): Hydrazine
derivatives, substituted,
from (NIEMANN, SCHOEFFEL,
and LINK)

1933, 101, 337

Naturally occurring, methyl-
glycosides (MORELL and
LINK) 1934, 104, 183

(MORELL, BAUR, and LINK)

1934, 105, 1

(BAUR and LINK)

1935, 109, 293

Synthesis (NIEMANN, KAR-
JALA, and LINK)

1934, 104, 189

(NIEMANN and LINK)

1934, 104, 195

(NIEMANN, McCUBBIN, and
LINK) 1934, 104, 737

(NIEMANN and LINK)

1934, 104, 743

1934, 106, 773

Hibernation: Urine nitrogen
partition, woodchuck (CAR-
PENTER)

1937-38, 122, 343

Hippuric acid: Phenaceturic acid
and, synthesis and excretion
rates, comparison (TULANE
and LEWIS)

1933, 103, 151

Synthesis, hydrazine intoxica-
tion and (TULANE, CHRIST-
MAN, and LEWIS)

1933, 103, 141

Histamine: -Like substance, hy-
drolyzed proteins (Mc-
MEEKIN) 1935, 109, lxiv

Histidine: *d*-Alanyl-*l*-, prepara-
tion and blood pressure effect
(HUNT and DU VIGNEAUD)

1938, 124, 699

l-Alanyl-*l*-, preparation and
blood pressure effect (HUNT
and DU VIGNEAUD)

1938, 124, 699

dl-Amino-N-methyl-, growth
effect (FISHMAN and WHITE)

1936, 113, 175

l-Amino-N-methylhistidine
preparation from (DU VI-
GNEAUD and BEHRENS)

1937, 117, 27

β -*l*-Aspartyl-*l*-, *l*-carnosine pre-
cursor (DU VIGNEAUD and
HUNT) 1938, 125, 269

Aspergillus sydowi, isolation
(WOOLLEY and PETERSON)

1937, 118, 363

d-, growth effect (COX and
BERG) 1934, 107, 497

—, optical inversion in body
(CONRAD and BERG)

1937, 117, 351

Histidine—continued:

- Deficient diet, *l*-carnosine utilization (DU VIGNEAUD, SIFFERD, and IRVING) 1937, 117, 589
- Determination, color stabilization (THOMAS) 1938, 123, cxxi
- Formol titration, behavior (LEVY) 1934, 105, li
- Imidazole ring protection (DU VIGNEAUD and BEHRENS) 1937, 117, 27
- l*-, growth effect (COX and BERG) 1934, 107, 497
- , monohydrochloride, absorption rate (DOTY and EATON) 1937-38, 122, 139
- l*-1-Methyl-, anserine synthesis from (BEHRENS and DU VIGNEAUD) 1937, 120, 517
- Peptide, physical constants (GREENSTEIN) 1933, 101, 603
- Preparation (GILSON) 1938, 124, 281
- Yeast, determination, Kapper-Adler method (WOOLLEY and PETERSON) 1937-38, 122, 207
- Homocysteine:** Isolation (RIEGEL and DU VIGNEAUD) 1935-36, 112, 149
- Metabolism, cystinuria (BRAND, CAHILL, and BLOCK) 1935, 110, 399
- Thiolactone conversion from (RIEGEL and DU VIGNEAUD) 1935-36, 112, 149
- Homocystine:** Acetyl derivatives, optical isomers, structure and physiological action, re-

Homocystine—continued:

- lation (DU VIGNEAUD, DYER, and JONES) 1937, 119, 47
- Chemical constitution (DU VIGNEAUD, DYER, and HARMON) 1933, 101, 719
- d*-, growth effect (DYER and DU VIGNEAUD) 1935, 109, 477
- Growth-promoting properties, cystine-deficient diet (DU VIGNEAUD, DYER, and HARMON) 1933, 101, 719
- Isomers, optically active, methionine, naturally occurring, configurational relationship (DU VIGNEAUD and PATTERSON) 1935, 109, 97
- , — —, preparation (DU VIGNEAUD and PATTERSON) 1935, 109, 97
- l*-, growth effect (DYER and DU VIGNEAUD) 1935, 109, 477
- Metabolism, cystinuria (BRAND, CAHILL, and BLOCK) 1935, 110, 399
- Nutrition rôle (WHITE and BEACH) 1937-38, 122, 219
- Sulfur, oxidation, body (DU VIGNEAUD and CRAFT) 1934, 105, xcvi
- (DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481
- Synthesis (PATTERSON and DU VIGNEAUD) 1935, 111, 393
- Homodjenkolic acid:** Metabolism (DYER) 1937, 119, xxviii

Homologous series: Molecular rotations (LEVENE and MARKER) 1933, 103, 299

Homomethionine: Availability (DYER and DU VIGNEAUD) 1935, 108, 73

Synthesis (DU VIGNEAUD, DYER, JONES, and PATTERSON) 1934, 106, 401

Hormone(s): Phyto-, structure and physiological activity (KOEPLI, THIMANN, and WENT) 1937-38, 122, 763

Plant, wound (ENGLISH and BONNER) 1937, 121, 791

See also Sex hormones

Horn: Cattle, amino acid, basic (BLOCK) 1934, 104, 339

Horse: Abdominal fat (SCHUETTE, GARVIN, and SCHWOEGLER) 1934, 107, 635

Blood serum lipase, action (FALK and McGUIRE) 1934, 105, 379

— — phosphorus, inorganic, age and nutrition effect (PEARSON) 1934, 106, 1

Hydantoin: Cystine, preparation and properties (ANDREWS and ANDREWS) 1934, 105, iv

Phenyl-, cystine, decomposition (ANDREWS and ANDREWS) 1933, 102, 253

Hydrazine: Acetone bodies, production, phlorhizinized animal (GREENBERG) 1935-36, 112, 431

Derivatives, hexuronic acids (NIEMANN, SCHOEFFEL, and LINK) 1933, 101, 337

Hydrazine—continued:

Intoxication, hippuric acid synthesis and (TULANE, CHRISTMAN, and LEWIS) 1933, 103, 141

Hydriodic acid: Aminosorbitol hydrochloride reduction (LEVENE and CHRISTMAN) 1938, 123, 77

Protein hydrolysis (KASELL and BRAND) 1938, 125, 145

Hydrocarbons: Methylphenyl- and ethylphenylacetic acids, derived from (LEVENE and MARKER) 1935, 108, 409

Hydrochloric acid: Gastric juice, chloride, neutral, relation (HOLLANDER) 1938, 125, 161

Hydrocyanic acid: Citrus leaves, fumigated (BARTHOLOMEW and RABY) 1936, 113, 655

Hydrogen: Active, ferrous hydroxide autoxidation, formation (BAUDISCH) 1934, 105, vii

Amino acid stability in (KESTON and RITTENBERG) 1938, 123, lxxviii

Stability, amino acids, deuterium as indicator (RITTENBERG, KESTON, SCHOENHEIMER, and FOSTER) 1938, 125, 1

Hydrogen iodide: Glucosaminic acid reduction (LEVENE and CHRISTMAN) 1938, 123, 83

Hydrogen ion concentration:

- Aqueous humor, determination, microquinhedron electrode, rachitic and normal rats (PIERCE)
1935, 111, 501
- Biological fluids, determination, glass electrode (HÖR-WITT)
1938, 123, lx
- Blood and blood serum, potential drift, quinhedron method (HÄNKE and JOHN-SON)
1935, 109, xl
- , determination, colorimetric (MYERS, MUNTWYLER, BINNS, and DANIELSON)
1933, 102, 19
- , —, glass electrode (SEND-ROY, SHEDLOVSKY, and BEL-CHER)
1936, 115, 529
- , exercise effect (LOONEY)
1938, 123, lxxvi
- serum, determination, colorimetric, protein effect (ROBINSON, PRICE, and CULLEN)
1935, 109, lxxiv
1936, 114, 321
- Cartilage, epiphyseal, normal and rachitic (PIERCE)
1938, 124, 115
- Gastrointestinal tract, determination, glass electrode (EASTMAN and MILLER)
1935, 110, 255
- Hemoglobin solutions, determination errors (DILL, FORBES, and HENDERSON)
1935, 109, xxvii
- Intestine (HERRIN)
1937, 118, 459
- , small (ROBINSON)
1935, 108, 403

**Hydrogen ion concentration—
*continued:***

- Liver proteins, extractability, effect (LUCK and NIMMO)
1937, 119, lxx
- Papilloma virus protein, stability (BEARD and WYCKOFF)
1938, 123, 461
- Saliva, determination (SOYEN-KOFF and HINCK)
1935, 109, 467
- Sugar-beet, carbon dioxide effect (FIFE and FRAMPTON)
1935, 109, 643
- Tobacco mosaic virus protein, stability (WYCKOFF)
1937-38, 122, 239
- Urine, glomerulus, frog and *Necturus* (MONTGOMERY)
1935, 110, 749
- , —, *Necturus*, determination, microquinhedron electrode (PIERCE and MONTGOMERY)
1935, 110, 763
- Hydrogen peroxide:** Monoethyl, decomposition, catalase (STERN)
1936, 114, 473
- Phosphate-, system, alkaline, fatty acid oxidation, mechanism (WITZEMANN)
1934, 107, 475
- Production, amino acid oxidation (BERNHEIM, BERNHEIM, and GILLASPIE)
1936, 114, 657
- Starch hydrolysis (BROWN)
1936, 113, 417
- l*-Xyloketose, action (ENKLEWITZ)
1936, 116, 47
- Hydrogen sulfide:** Milk treated with, copper deficiency development (SUMMERSON)
1938, 123, cxix

Hydrogen sulfide—continued:

Sulfur compounds reduced to,
intestinal microorganism
(ANDREWS)

1937-38, 122, 687

Hydronephrosis: Blood and mus-
cle salt and water exchange,
effect (EICHELBERGER)

1937, 119, xxx

Hydroxy acid(s): 2-, acetic acids,
disubstituted, configura-
tional correlation (LEVENE
and HARRIS)

1935-36, 112, 195

Poly-, pepper, sweet (BAU-
MANN, SPRINSON, and METZ-
GER)

1937, 119, viii

Hydroxyamino acids: Phosphoric
esters, synthesis (LEVENE
and SCHORMÜLLER)

1934, 105, 547

1934, 106, 595

Hydroxybutyric acid: β -, aceto-
acetic acid reduction to in
liver, malonic acid effect
(STARK and COHEN)

1938, 123, cxv

Hydroxy-*n*-caproic acid: α -, α -
hydroxyisocaproic acid, con-
figurational relationship
(BARTLETT, KUNA, and LE-
VENE)

1937, 118, 513

Hydroxyetioallocholane-17-one:
3(β)-, urine, adrenal tumor,
isolation (BUTLER and MAR-
RIAN)

1938, 124, 237

Hydroxyetiocholane-17-one:
3(α)-, urine, adrenal tumor,
isolation (BUTLER and MAR-
RIAN)

1938, 124, 237

Hydroxyisocaproic acid: α -, α -
hydroxy-*n*-caproic acid, con-
figurational relationship

(BARTLETT, KUNA, and LE-
VENE)

1937, 118, 513

Hydroxyisovaleric acid: α -, α -
hydroxy-*n*-valeric acid, con-
figurational relationship
(BARTLETT, KUNA, and LE-
VENE)

1937, 118, 503

Hydroxy-6-ketoallocholanolic acid:
3-, bile, isolation (ANCHEL
and SCHOENHEIMER)

1938, 124, 609

Hydroxylated acids: Fats, de-
termination (HAFNER, SWIN-
NEY, and WEST)

1936, 116, 691

Hydroxy- γ -methiobutyric acid:
dl- α -, metabolism, cystinuria
(BRAND, BLOCK, and
CAHILL)

1937, 119, 681

Hydroxymethyl-2-thiolimidazole:
4-, and 5- (JACKSON and
MARVEL)

1933, 103, 191

Hydroxyprolinephosphoric acid:
l-, synthesis (LEVENE and
SCHORMÜLLER)

1934, 106, 595

Hydroxyquinoline: 8-, magne-
sium determination (GREEN-
BERG, ANDERSON, and
TUFTS)

1935, 111, 561

Blood serum magnesium de-
termination, colorimetric
(HOFFMAN)

1937, 118, 37

Hydroxystearic acid: *dl*- α -, de-
rivatives (LEVENE and
YANG)

1933, 102, 557

—, oxidation (LEVENE and
YANG)

1933, 102, 557

—, —, cerebronic acid chemical
constitution, relationship
(KLENK and DITT)

1935, 111, 749

- (LEVENE and YANG)
1935, 111, 751
- Hydroxy-*n*-valeric acid:** α -, α -hydroxyisovaleric acid, configurational relationship (BARTLETT, KUNA, and LEVENE) 1937, 118, 503
- Hygrometer:** Chemical (CARPENTER) 1935-36, 112, 123
- Hypercalcemia:** Blood calcium phosphate, colloidal, formation (GREENBERG and TUFTS) 1934, 105, xxxii
— serum calcium, forms (BENJAMIN and HESS) 1933, 103, 629
— — phosphorus, inorganic, forms (BENJAMIN and HESS) 1933, 103, 629
- Hyperglycemia:** Factor, urine (HARROW, MAZUR, CHAMELIN, and LESUK) 1937, 119, xlv
Insulin, insulin sensitivity measure (DOTTI) 1934, 105, xxii
- Hyperparathyroidism:** Kidney insufficiency (HIGHMAN) 1938, 123, lvi
- Hypersideremia:** Iron administration effect (BING, HANZAL, and MYERS) 1935, 109, viii
- Hypertension:** Chemistry (SUL-LIVAN) 1938, 123, cxix
Epinephrine injection rate, effect (KOEHLER, MARSH, and HILL) 1937, 119, lix
Essential, adrenal epinephrine relation (KOEHLER) 1936, 114, lix
- Hyperthermia:** Blood serum acid-base equilibrium (DANIELSON and STECHER) 1936, 114, xxiii
- Hyperthyroidism:** Liver function (BUELL and STRAUSS) 1934, 105, xiv
- Hypertrophy:** Tissue, frog, lipids, relation (BOYD) 1937, 121, 783
- Hypervitaminosis:** Ergosterol, irradiated, fish liver oil concentrates and, comparison (MORGAN, KIMMEL, and HAWKINS) 1937, 119, lxx
1937, 120, 85
- Hypoglycemia:** Autogenous, diabetes (PAUL and GIBSON) 1938, 123, xci
- Hypophysectomy:** Glycogen disappearance and carbohydrate oxidation (FISHER, RUSSELL, and CORI) 1936, 115, 627
— Pancreatectomy, effect (LONG and LUKENS) 1935, 109, lvi
- Hypophysis:** See Pituitary
- Hypoproteinemia:** Nutritional, blood serum electrolytes and calcium, effect (DARROW and CARY) 1934, 105, 327
- Hypotrichosis:** Hereditary, cysteine effect (ROBERTS) 1937, 118, 627
—, sulfhydryl group, trichogenic action (MARTIN and GARDNER) 1935, 111, 193
- I
- Imidazole(s):** Blood (SCHMIDT, SCHMULOVITZ, SZCZPINSKI, and WYLIE) 1937, 120, 705

Imidazole(s)—*continued*:

Derivatives, titration constants (LEVY)

1935, 109, 361

4-Hydroxymethyl-2-thiol-
(JACKSON and MARVEL)

1933, 103, 191

5-Hydroxymethyl-2-thiol-
(JACKSON and MARVEL)

1933, 103, 191

Imidazole ring: Histidine, protection (DU VIGNEAUD and BEHRENS) 1937, 117, 27

Imino acids: Formaldehyde reaction (LEVY and SILBERMAN)

1937, 118, 723

Inanition: Pyruvic acid metabolism (LIPSCHITZ, POTTER, and ELVEHJEM)

1938, 123, 267

Indican: Urine, determination (ROSE and EXTON)

1935, 109, lxxvi

Indigo sulfonates: Absorption spectra (LOEFFEL)

1935, 109, lvi

Indole: Derivatives, kynurenic acid production (BAUGUESS and BERG)

1934, 104, 691

1934, 105, viii

Indoleacrylic acid: β -3-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG)

1934, 104, 675

Indolelactic acid: *l*- and *dl*- β -3-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG)

1934, 104, 675

Indolepropionic acid: α -Oximino- β -3-, tryptophane-deficient

diet supplement, growth effect (BAUGUESS and BERG)

1934, 104, 675

Indophenol oxidase: Cytochrome effect (STOTZ, SIDWELL, and HOGNESS) 1938, 124, 733

Indoxyl compounds: Blood, determination (SHARLIT)

1934, 104, 115

Infancy: Calcium retention (STEARNS)

1934, 105, lxxxiv

— —, vitamin D effect (STEARNS and JEANS)

1936, 114, c

Creatine and creatinine excretion (CATHERWOOD and STEARNS) 1937, 119, 201

— — — metabolism (CATHERWOOD and STEARNS)

1936, 114, xviii

Infant: Urine, sulfanilamide secretion (HEPBURN, PAXSON, and ROGERS) 1938, 123, liv

Inflammation: Pleural exudates, cellular proteinase and peptidase activity (WEISS, KAPLAN, and LARSON)

1938, 125, 247

Inorganic acids: Ascorbic acid oxidation, catalytic, effect (LYMAN, SCHULTZE, and KING) 1937, 118, 757

Inorganic composition: Blood (KERR) 1937, 117, 227

Inorganic constituents: Diet deficient in, blood serum electrolyte balance, effect (SMITH and SMITH) 1934, 107, 681

— low in, blood serum acid-base equilibrium, effect (SMITH and SMITH)

1934, 105, lxxxi

Inorganic constituents—continued:

Diet poor in, bone composition
(BROOKE, SMITH, and SMITH)

1934, 104, 141

— — —, kidney effect (SWAN-
SON, STORVICK, and SMITH)

1936, 114, 309

Saliva, mixed and parotid
gland (BAXTER)

1933, 102, 203

Inorganic salt(s): Benzoic acid
detoxication, effect (GRIF-
FITH) 1935, 109, xxxix

(SHEPPECK and GRIFFITH)

1936, 114, xcii

Blood minerals, intake effect
(HELLER and PAUL)

1934, 105, 655

-Deficient diet, reticulocytes,
effect (ORTEN and SMITH)

1934, 105, 181

Dehydration and recovery, bal-
ance (WILEY and WILEY)

1933, 101, 83

Dietary, tissue ash, influence
(EPPRIGHT and SMITH)

1937, 118, 679

Metabolism, sodium, potas-
sium, and ammonium chlo-
rides and sodium bicarbon-
ate, ingestion effect (WILEY,
WILEY, and WALLER)

1933, 101, 73

Nutrition (BROOKE, SMITH,
and SMITH)

1934, 104, 141

(SMITH and SMITH)

1934, 107, 681

(LIGHT, SMITH, SMITH, and
ANDERSON)

1934, 107, 689

(SWANSON, STORVICK, and
SMITH)

1936, 114, 309

Inosinic acid: Muscle (LEVENE
and TIPSON)

1935, 111, 313

Inositol: Oxidation products,
oxidation-reduction poten-
tials (PREISLER, HILL, RON-
ZONI, and YOUNG)

1938, 123, xcv

Yeast growth, effect (WILLIAMS
and SAUNDERS)

1934, 105, xcix

Insulin: Acetylation, ketene ac-
tion (STERN and WHITE)

1937-38, 122, 371

Action, prolongation (FISHER
and SCOTT)

1937, 119, xxxiii

—, protamine and zinc effect
(SCOTT and FISHER)

1936, 114, lxxxviii

Allantoin excretion, effect
(LARSON and CHAIKOFF)

1935, 108, 457

Amino groups, free (JENSEN
and EVANS) 1935, 108, 1

Anhydremia, effect (CHAI-
KELIS) 1934, 105, 767

Blood amino acid nitrogen,
effect (POWERS and REIS)

1933, 101, 523

— — acids, adrenalectomy,
effect (DAVIS and VAN
WINKLE) 1934, 104, 207

— glucose-chloride relation-
ship, effect (CHAIKELIS)

1934, 105, 767

— lactic acid, adrenal medulla
removal and, effect (SCOTT
and BERG) 1936, 115, 163

— lipid metabolism, depan-
creatized dog, choline and,
effect (KAPLAN and CHAI-
KOFF) 1937, 120, 647

Insulin—continued:

- Blood lipids, depancreatized dog, effect (CHAIKOFF and KAPLAN) 1934, 106, 267
- — —, pancreas ingestion and, effect (CHAIKOFF and KAPLAN) 1935-36, 112, 155
- sugar, effect (DOTTI and HRUBETZ) 1936, 113, 141
- urea nitrogen, effect (POWERS and REIS) 1933, 101, 523
- Brain glycogen, free sugar, and lactic acid, normal and adrenal-inactivated cats, effect (KERR, HAMPEL, and GHANTUS) 1937, 119, 405
- , mammalian, glycogen, free sugar and lactic acid, carbohydrate and, effect (KERR and GHANTUS) 1936, 116, 9
- Constitution, sulfur relation (STERN and WHITE) 1937, 119, xcv
- Convulsions, blood sugar, true (DOTTI) 1934, 104, 535
- Crystalline, chemistry (JENSEN, EVANS, PENNINGTON, and SCHOCK) 1935, 109, xliv
- , phenylalanine isolation (JENSEN and EVANS) 1935, 108, 1
- , proline isolation (JENSEN and EVANS) 1935, 108, 1
- Cystine (MILLER and DU VIGNEAUD) 1937, 118, 101
- (SULLIVAN and HESS) 1937, 119, xcvi

Insulin—continued:

- Heat precipitation (DU VIGNEAUD, SIFFERD, and SEALOCK) 1933, 102, 521
- Hyperglycemia, insulin sensitivity measure (DOTTI) 1934, 105, xxii
- Inactivation, metal derivatives and sulfhydryl compounds, effect (SCHOCK, JENSEN, and HELLERMAN) 1935, 111, 553
- Like hormone (LAUGHTON and MACALLUM) 1935, 109, lii
- (MACALLUM) 1936, 114, lxiii
- Liver fat, depancreatized dogs, effect (KAPLAN and CHAIKOFF) 1937, 119, 423
- glycogenase, effect (VOLLMAR and KOEHLER) 1936, 114, cvi
- — metabolism, depancreatized dog, choline and, effect (KAPLAN and CHAIKOFF) 1937, 120, 647
- lipids, depancreatized dog, effect (KAPLAN and CHAIKOFF) 1935, 108, 201
- — —, pancreas feeding and, effect (KAPLAN and CHAIKOFF) 1937, 119, 435
- Pancreas antagonism and synergism (MACALLUM) 1938, 123, lxxviii
- , cattle, age effect (FISHER and SCOTT) 1934, 106, 305
- Peptic hydrolysis (FISHER and SCOTT) 1934, 106, 289

Insulin—continued:

Purine metabolism, adrenal medulla and, relation (LARSON and BREWER)

1936, 115, 279

— —, Dalmatian coach-dog (CHAIKOFF and LARSON)

1935, 109, 85

Reactions (JENSEN, EVANS, PENNINGTON, and SCHOCK)

1936, 114, 199

Reduced, properties (STERN and WHITE)

1937, 117, 95

(WHITE and STERN)

1937, 119, 215

Stability, factors influencing (SAHYUN, GOODELL, and NIXON)

1937, 117, 685

Sulfhydryl compounds, effect (WINTERSTEINER)

1933, 102, 473

Intestine: Aminopolypeptidase specificity (JOHNSON)

1937-38, 122, 89

Ammonia (HERRIN)

1937, 118, 459

Carbohydrate absorption (PIERCE and HÆGE)

1938, 123, xciii

Carbon dioxide tension (HERRIN)

1937, 118, 459

Enzyme, new (BERGMANN and FRUTON)

1937, 117, 189

Enzymes, dehydration effect (ROSS and SHAW)

1934, 104, 131

Hydrogen ion concentration (HERRIN)

1937, 118, 459

Juice loss, blood effect (HERRIN)

1935, 108, 547

— —, effect (HERRIN)

1935, 108, 547

Intestine—continued:

Lactase, characteristics (CAJORI)

1935, 109, 159

Microorganism, sulfur compounds reduced to hydrogen sulfide (ANDREWS)

1937-38, 122, 687

Mineral partition, digestion (SCHAIBLE, BANDEMER, and MOORE)

1935, 109, lxxix

Mucosa, lactose (CAJORI)

1935, 109, 159

—, phospholipid turnover (SINCLAIR and SMITH)

1937, 121, 361

—, phospholipids, fat absorption (SINCLAIR)

1937, 119, xc

Phosphatase, α -amino acids and magnesium, effect (BODANSKY)

1936, 115, 101

— identification, bile acids as aid (BODANSKY)

1937, 118, 341

Phospholipid metabolism, rôle, ingested fat effect (FRIES, RUBEN, PERLMAN, and CHAIKOFF)

1938, 123, 587

Plant sterols, fate (BREUSCH)

1938, 124, 151

Secretions, composition (DE BEER, JOHNSTON, and WILSON)

1935, 108, 113

Small, hydrogen ion concentration (ROBINSON)

1935, 108, 403

—, vitamin C distribution (GLICK and BISKIND)

1936, 113, 427

Vitamin D excretion (HEYMANN)

1937-38, 122, 257

See also Duodenum, Jejunum

Inulin: Clearance (RICHARDS, WESTFALL, and BOTR)

1936, 116, 749

Diffusion coefficient (BUNIM, SMITH, and SMITH)

1937, 118, 667

Excretion, glomerulus, frog and *Necturus* (HENDRIX, WESTFALL, and RICHARDS)

1936, 116, 735

Molecular weight (WESTFALL and LANDIS)

1936, 116, 727

Invertase: Yeast, activity, protein influence (SAUL and NELSON)

1935, 111, 95

—, preparation (LUTZ and NELSON)

1934, 107, 169

Iodide(s): Goiter, administration effect (REMINGTON and LASSEK)

1937, 119, lxxxii

Microdetermination, dioxane use (SAIFER and HUGHES)

1937, 118, 241

1937, 121, 801

Sterol dibromides, action (SCHOENHEIMER)

1935, 110, 461

Thyroid iodine and thyroxine, administration effect (FOSTER)

1934, 104, 497

Iodine: Amino nitrogen determination, manometric, use (KENDRICK and HANKE)

1937, 117, 161

Balance (COLE and CURTIS)

1934, 105, xvii

1935, 109, xxii

Biological material, determination (TREVORROW and FASHENA)

1935, 110, 29

(FASHENA and TREVORROW)

1936, 114, 351

Iodine—continued:

(McCLENDON and BRATTON)

1938, 123, 699

Blood, amount (BAUMANN and METZGER)

1937, 121, 231

—, determination (McCLENDON, HAMILTON, and HOLDRIDGE)

1934, 105, lviii

(McCLENDON, BRATTON, and WHITE)

1937, 119, lxxvii

(McCLENDON and BRATTON)

1938, 123, 699

(McCLENDON and RICE)

1938, 123, lxxxii

(STRICKLER and WILSON)

1938, 123, cxviii

Cabbage, determination (McCLENDON, HAMILTON, and HOLDRIDGE)

1934, 105, lviii

Cysteine oxidation (SIMONSEN)

1933, 101, 35

Determination (McCULLAGH)

1934, 107, 35

(STIMMEL and McCULLAGH)

1936, 116, 21

Diffusible, blood, determination (McCULLAGH and PICHA)

1934, 105, lix

Goiter and, in Far East (McCLENDON)

1933, 102, 91

Papain inactivation (BERGMANN and ZERVAS)

1936, 114, 711

Pituitary and tissues (BAUMANN and METZGER)

1938, 123, vi

Solutions, standard (SCOTT)

1936, 113, 511

Thyroglobulin (CAVETT, RICE, and McCLENDON)

1935, 109, xvii

Iodine—*continued*:

- Thyroglobulin, normal and goitrous (CAVETT, RICE, and McCLENDON) 1935, 110, 673
- Thyroid, iodide and diiodo-tyrosine administration effect (FOSTER) 1934, 104, 497
- , microdetermination (BLAU) 1938, 123, xii
- Urine, determination (McCLENDON, HAMILTON, and HOLDRIDGE) 1934, 105, lviii
- Iodoacetamide**: Sulfhydryl groups, urease, and fermentation, action (SMYTHE) 1936, 114, xcv
- — —, — yeast preparations, reaction (SMYTHE) 1936, 114, 601
- Iodoacetate**: Sulfhydryl groups, urease, and fermentation, action (SMYTHE) 1936, 114, xcv
- — —, — yeast preparations, reaction (SMYTHE) 1936, 114, 601
- Iodoacetic acid**: Amines, tertiary, action (SCHUBERT) 1936, 116, 437
- Amino acids, sulfur-containing, nutrition deficiency (SIMON and WHITE) 1938, 123, cix
- Mercaptans and amines, reaction (MICHAELIS and SCHUBERT) 1934, 106, 331
- Yeast fermentation inhibition, sulfhydryl relation (SCHROEDER, WOODWARD, and PLATT) 1933, 101, 133

- Ion(s)**: Activity coefficients and reaction rate, systems containing (STRAUF-COPE and COHN) 1934, 105, lxxxvii
- — in systems containing (JOSEPH) 1934, 105, xliii
- Zwitter. *See* Zwitter ions
- Iron**: Anemia, milk-produced, cobalt with copper and, effect (UNDERWOOD and ELVEHJEM) 1938, 124, 419
- , nutritional, parenteral administration (EVELETH, BING, and MYERS) 1933, 101, 359
- Available, determination, bipyridine (KOHLE, ELVEHJEM, and HART) 1936, 113, 49
- Biological materials, availability (SHERMAN, ELVEHJEM, and HART) 1934, 107, 383
- —, determination (ROSE, EXTON, and BLACKER) 1934, 105, lxxiii
- (KLUMPP) 1934, 107, 213
- (FARRAR) 1935, 109, xxxi
- —, microestimation, titrimetric (HORWITT) 1934, 105, xli
- Blood (HELMER and EMERSON) 1934, 104, 157
- (JOHNSON and HANKE) 1936, 114, 157
- , determination (BURMESTER) 1934, 105, 189
- , Eskimos (LEVINE, SACHS, and FABIAN) 1937, 119, lxiii

Iron—continued:

- Dietary, hematopoiesis effect
(DAY, STEIN, and MCCOLLUM) 1938, 123, xxviii
- , tissue cytochrome and oxidase, relation (COHEN and ELVEHJEM) 1934, 107, 97
- Egg yolk, hemoglobin formation, influence (SHERMAN, ELVEHJEM, and HART) 1934, 107, 289
- Epidermis, pellagra, relation (LEWIS) 1934, 105, lii
- Fetus (IOB and SWANSON) 1938, 124, 263
- Hemoglobin (MORRISON and HISEY) 1935, 109, 233
- formation, availability (ELVEHJEM, HART, and SHERMAN) 1933, 103, 61
- —, copper supplement (SCHULTZE, ELVEHJEM, and HART) 1934, 106, 735
1935, 115, 453
- regeneration, anemia, copper and, effect (SMITH and OTIS) 1937, 119, xcii
- Hypersideremia, administration effect (BING, HANZAL, and MYERS) 1935, 109, viii
- Inorganic, animal tissues, determination (BORGES and ELVEHJEM) 1937, 119, 725
- Liver, distribution, peptic digestion and autolysis (McFARLANE) 1934, 106, 245
- Metabolism and hemoglobin production, nutritional anemia (BING, SAURWEIN, and MYERS) 1934, 105, 343

Iron—continued:

- Metabolism, chick embryo (McFARLANE and MILNE) 1934, 107, 309
- Milk, anemia relation (KRAUSS and WASHBURN) 1936, 114, 247
- Plant tissue, histochemical analysis (REED and DUFRENOY) 1934, 105, lxx
- Requirement, pregnancy (KYER and BETHELL) 1936, 114, lx
- Reticulocyte response, anemia, effect (SCHULTZE and ELVEHJEM) 1933, 102, 357
- Storage, sex influence (STEENBOCK, SEMB, and VAN DONK) 1936, 114, ci
- Tissue and organ, anemia, nutritional (SCHULTZE, ELVEHJEM, and HART) 1936, 116, 93
- Tissues, distribution, normal and anemic rats (WAKEHAM and HALENZ) 1936, 115, 429
- , —, peptic digestion and autolysis (McFARLANE) 1934, 106, 245
- Iron pyrophosphate:** Glucose oxidation in air (GOERNER) 1934, 105, 705
- Isoandrosterone:** *See also* 3(β)-Hydroxyetioallocholane-17-one
- Isobarbituric acid:** Metabolism, growing dog (CERECEDO and STEKOL) 1934, 107, 425
- Isobutyl acids:** Normal series, configurational relationship (LEVENE and MARKER) 1935, 111, 299

Isobutyrylformic acid: Ergot alkaloid, precursor (JACOBS and CRAIG)

1937-38, 122, 419

Isocitric acid: Synthesis, citric acid (GREENSTEIN)

1936, 114, xliii

Isoelectric points: Calculation (HITCHCOCK)

1936, 114, 373

Isoelectric zones: Calculation (HITCHCOCK)

1936, 114, 373

Iso glutathione: Synthesis (DU VIGNEAUD, LORING, and MILLER)

1937, 118, 391

Isoleucine: *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON)

1936, 114, 85

dl-, fate (BUTTS, BLUNDEN, and DUNN)

1937, 120, 289

Growth relation (WOMACK and ROSE)

1936, 116, 381

Metabolism (CARTER)

1935, 108, 619

Phenyl derivatives, synthesis (CARTER)

1935, 108, 619

Isooleic acid: Hydrogenation, deposition and utilization, body (BARBOUR)

1933, 101, 63

Isoouabain: Degradation (JACOBS and BIGELOW)

1933, 101, 15

Isopropyl acids: Normal series, configurational relationship (LEVENE and MARKER)

1935, 111, 299

Isopropyl alcohol: Butyl alcohol, fermentation (OSBURN, BROWN, and WERKMAN)

1937, 121, 685

Isopropylcarbinols: Configurational relationship (LEVENE and MARKER)

1933, 101, 413

J

Jack bean: *See* Bean

Jaundice: Blood, blood serum phosphatase, effect (FREEMAN and CHEN)

1938, 123, 239

— serum bilirubin (BODANSKY and JAFFE)

1935, 109, x

— — cholesterol (BODANSKY and JAFFE)

1935, 109, x

— — phosphatase (BODANSKY and JAFFE)

1935, 109, x

(FREEMAN, CHEN, and IVY)

1938, 124, 79

β -Carotene absorption and utilization, vitamin A deficiency (GREAVES and SCHMIDT)

1934, 105, xxxi

Obstructive, prothrombin (QUICK)

1935, 109, lxxiii

Jejunum: Loop, transplanted, enzyme production (PIERCE, NASSET, and MURLIN)

1935, 108, 239

Jelly: Wharton, lipid (BOYD)

1935, 111, 667

K

Keratin(s): (GODDARD and MICHAELIS)

1934, 106, 605

Amino acids, basic (BLOCK)

1934, 104, 339

(BLOCK and HORWITT)

1937, 121, 99

Derivatives (GODDARD and MICHAELIS)

1935-36, 112, 361

Keratin(s)—*continued*:

Eu-, ectoderm (BLOCK)
1937, 121, 761

Human, isoelectric point (WILKERSON) 1935, 109, xcix

—, stratum corneum amino acids, comparison (WILKERSON) 1934, 107, 377

Pseudo-, ectoderm (BLOCK)
1937, 121, 761

Ketene: Diphtheria toxin, action (PAPPENHEIMER)

1938, 125, 201

Insulin acetylation (STERN and WHITE)

1937-38, 122, 371

— reaction (STERN and WHITE)

1937, 119, xcv

Keto acids: Amino acid synthesis from, acetyl derivative, rôle (DU VIGNEAUD and IRISH) 1935, 109, xciv

1937-38, 122, 349

Production, amino acid oxidation (BERNHEIM, BERNHEIM, and GILLASPIE)

1936, 114, 657

Ketogenesis: (COHEN)

1937, 119, 333

Liver (COHEN and STARK)

1938, 123, xxiii

Ketogenic principle: Hypophysis, nature (SHIPLEY)

1938, 123, cix

Ketolysis: Liver (COHEN and STARK) 1938, 123, xxiii

Ketone: Reagents, ketonic acids, isolation (ANCHEL and SCHOENHEIMER)

1938, 124, 609

Ketone body: Excretion, factors influencing (CHAMBERLIN, FURGASON, and HALL)

1937, 121, 599

Ketone substance: Tissue, diabetes, production and destruction (GOLDFARB and HIMWICH)

1933, 101, 441

Ketonic acids: α -, α -amino acids, reaction (HERBST and ENGEL) 1934, 107, 505

Isolation, ketone reagents in (ANCHEL and SCHOENHEIMER) 1938, 124, 609

Ketonuria: Carbohydrate action (DEUEL, HALLMAN, and MURRAY)

1938, 123, xxix

1938, 124, 385

Choline effect (DEUEL, MURRAY, HALLMAN, and TYLER)

1937, 120, 277

Fasting, fatty livers, relation (DEUEL, HALLMAN, and MURRAY)

1937, 119, 257

Liver fat, relation (DEUEL, HALLMAN, and MURRAY)

1937, 119, xxii

Pituitary, anterior, relation (DEUEL) 1934, 105, xix

Ketopiperazines: 2,5-Di-, hydrolysis (SRINIVASAN and SREENIVASAYA)

1934, 105, 563

Ketose: Urine, normal (EVERETT, EDWARDS, and SHEPPARD)

1934, 104, 11

Ketosis: (DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD) 1933, 101, 301

Ketosis—continued:

- (BUTTS, CUTLER, HALLMAN, and DEUEL) 1935, 109, 597
 (DEUEL, BUTTS, HALLMAN, and CUTLER) 1935-36, 112, 15
 (DEUEL, HALLMAN, BUTTS, and MURRAY) 1936, 116, 621
 (DEUEL, BUTTS, BLUNDEN, CUTLER, and KNOTT) 1937, 117, 119
 (BUTTS, BLUNDEN, GOODWIN, and DEUEL) 1937, 117, 131
 (DEUEL, HALLMAN, and MURRAY) 1937, 119, 257
 (DEUEL, MURRAY, HALLMAN, and TYLER) 1937, 120, 277
 (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN) 1938, 123, 257
 (DEUEL, HALLMAN, and MURRAY) 1938, 124, 385
 (DEUEL, HALLMAN, MURRAY, and HILLIARD) 1938, 125, 79
 Fasted and fat-fed rats (GOLDFARB, BARKER, and HIMWICH) 1934, 105, 287
 Fasting monkey (FRIEDEMANN) 1934, 105, 335
 Glucose and carbohydrate intermediates, comparison (SHAPIRO) 1935, 108, 373
 Paradoxical (SOMOGYI) 1936, 114, xcvi
 Phlorhizin (GOLDFARB, BARKER, and HIMWICH) 1934, 105, 283

Ketosis—continued:

- Primates (GOLDFARB) 1936, 116, 787
 Sugars, comparative action (BUTTS) 1934, 105, 87
 Uric acid excretion, relation (QUICK) 1934, 105, lxi
 Kidney: Amino acids, deamination, oxygen tension effect (KEMPNER) 1938, 124, 229
 Aminopropionic acid deamination, oxidative (RODNEY and GARNER) 1938, 125, 209
 Antiglyoxalase (WOODWARD, MUNRO, and SCHROEDER) 1935, 109, 11
 (SCHROEDER, MUNRO, and WEIL) 1935, 110, 181
 Arginase activity distribution (WEIL and ELY) 1935-36, 112, 565
 Blood flow, measurement (MASON, BLALOCK, and HARRISON) 1936, 114, lxiv
 Diet poor in inorganic constituents, effect (SWANSON, STORVICK, and SMITH) 1936, 114, 309
 Enzyme, glutathione hydrolysis (SCHROEDER and WOODWARD) 1937, 120, 209
 Excretion, blood serum chloride and base, exercise effect (MORSE and SCHLUTZ) 1937, 119, lxxi
 Function, nephrectomy effect (CHANUTIN and LUDWIG) 1935, 109, xviii

Kidney—continued:

Hypertrophy, lipid phosphorus (LUDEWIG and CHANUTIN)

1936, 115, 327

Insufficiency, blood plasma and urine magnesium, magnesium sulfate ingestion, effect (HIRSCHFELDER)

1934, 104, 647

—, hyperparathyroidism (HIGHMAN)

1938, 123, lvi

—, parathyroid hormone action, effect (TWEEDY, TEMPLETON, and McJUNKIN)

1935, 109, xcii

Oxygen consumption, measurement, direct (MASON, BLALOCK, and HARRISON)

1936, 114, lxiv

Phenylalanine oxidation (BERNHEIM and BERNHEIM)

1934, 107, 275

Phosphatase, α -amino acids and magnesium, effect (BODANSKY)

1936, 115, 101

—, blood organic phosphorus hydrolyzed by, nature (KERR and ANTAKI)

1937, 121, 531

— identification, bile acids as aid (BODANSKY)

1937, 118, 341

—, physiological materials, effect (PYLE, FISHER, and CLARK)

1937, 119, 283

—, vasoligated (KINARD and CHANUTIN)

1933, 103, 461

Kidney—continued:

Respiration, normal and scorbutic animals (STOTZ, HARRER, SCHULTZE, and KING)

1937, 120, 129

Tyrosine oxidation (BERNHEIM and BERNHEIM)

1934, 107, 275

dl-Tyrosine oxidation (BERNHEIM)

1935, 111, 217

l-Tyrosine oxidation (BERNHEIM)

1935, 111, 217

Urea precursor in (KIRK)

1933, 102, 683

See also Nephrectomy, Nephritis, Nephrosis

Kinetics: Chemical reactions, rapid, spectroscopic method for study (STERN and DUBOIS)

1937, 121, 573

Kynurenic acid: Bile, administration effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

—, kynurenic acid and *l*- and *dl*-tryptophane administration effect (CORRELL, BERG, and COWAN)

1938, 123, 151

Excretion, Carnivora (JACKSON)

1938, 123, lxiii

—, mammals (GORDON, KAUFMAN, and JACKSON)

1936, 113, 125

Microidentification (GORDON, KAUFMAN, and JACKSON)

1936, 113, 125

Production, indole derivatives (BAUGUESS and BERG)

1934, 104, 691

1934, 105, viii

Kynurenic acid—*continued*:

- Production, tryptophane carbonic acid derivatives, relation (BAUGUESS and BERG) 1936, 114, 253
- , — derivatives (BAUGUESS and BERG) 1934, 105, viii
- , —, optical activity influence (BERG) 1934, 104, 373
- , *l*-tryptophane amides, effect (BAUGUESS and BERG) 1934, 106, 615
- Urine, kynurenic acid, and *l*- and *dl*-tryptophane administration effect (CORRELL, BERG, and COWAN) 1938, 123, 151

L

- Lactalbumin**: Cystinuria, metabolism (BRAND, BLOCK, KASSELL, and CAHILL) 1937, 119, 669
- (KASSELL, CAHILL, and BRAND) 1938, 125, 423
- Hydrolysis, enzyme (MILLER and CALVERY) 1936, 116, 393
- Nutritive value (KIK) 1937, 119, lvii
- Peptic hydrolysis (MILLER) 1935, 109, lxvi
- Reduced, cystinuria, metabolism (KASSELL) 1938, 123, lxvi
- (KASSELL, CAHILL, and BRAND) 1938, 125, 423
- Sulfur distribution (KASSELL and BRAND) 1938, 125, 435

Lactase: Intestine, characteristics (CAJORI)

- 1935, 109, 159
- mucosa (CAJORI) 1935, 109, 159

Lactate: Blood, determination (EDWARDS)

- 1938, 125, 571
- , exercise effect (JOHNSON and EDWARDS) 1937, 118, 427
- 1937, 119, liv

d-, oxygen consumption, influence (BUCHWALD, CORI, and FISHER) 1933, 103, 763*-Enzyme*-pyruvate system, oxidation-reduction potential (BARRON and HASTINGS) 1934, 107, 567*l*-, oxygen consumption, influence (BUCHWALD, CORI, and FISHER) 1933, 103, 763

Oxidation to pyruvate, erythrocytes and methylene blue effect (WENDEL) 1933, 102, 373

Urine, exercise effect (JOHNSON and EDWARDS)

- 1937, 118, 427
- 1937, 119, liv

Lactation: Alcohol-extracted animal tissues, effect (SEEGERS and MATTILL)

- 1934, 105, lxxvii
- Blood, cod liver oil, shark liver oil, and salmon oil, effect (McCAY and MAYNARD) 1935, 109, 29

— plasma lactose (HUBBARD and BROCK)

- 1935, 110, 411

Lactation—continued:

- Calcium requirement (COX and IMBODEN)
1934, 105, xviii
- Fat-free diet, effect (EVANS, LEPKOVSKY, and MURPHY)
1934, 106, 431
- Fat metabolism (MAYNARD and MCCAY)
1935, 109, lxi
- Fatty acids, saturated, as energy source (EVANS, LEPKOVSKY, and MURPHY)
1934, 106, 441
- Lactic acid utilization, mammary gland (GRAHAM)
1937-38, 122, 1
- Magnesium requirement, calcium relation (TUFTS and GREENBERG)
1937-38, 122, 715
- Milk, cod liver oil, shark liver oil, and salmon oil, effect (MCCAY and MAYNARD)
1935, 109, 29
- Phosphorus requirement (COX and IMBODEN)
1934, 105, xviii
- Tissue cholesterol, effect (OKEY, GODFREY, and GILLUM)
1938, 124, 489
- fatty acids, effect (OKEY, GODFREY, and GILLUM)
1938, 124, 489
- Lactic acid:** Bacteria, riboflavin and synthetic flavins, growth effect (SNELL and STRONG)
1938, 123, cxii
- Blood (BOTT and WILSON)
1935, 109, 463
- , exercise effect (LOONEY)
1938, 123, lxxvi

Lactic acid—continued:

- Blood, high altitudes, rest and work influence (EDWARDS)
1936, 114, xxx
- , insulin and adrenal medulla removal, effect (SCOTT and BERG)
1936, 115, 163
- , liver injury and (HAHN)
1933, 101, 29
- , schizophrenia (LOONEY and CHILDS)
1934, 105, liii
- Brain, insulin and epinephrine, effect (KERR, HAMPEL, and GHANTUS)
1937, 119, 405
- , mammalian (AVERY, KERR, and GHANTUS)
1935, 110, 637
- , —, carbohydrate and insulin effect (KERR and GHANTUS)
1936, 116, 9
- , origin (KERR and GHANTUS)
1937, 117, 217
- Crystalline, preparation (BOROOK, HUFFMAN, and LIU)
1933, 102, 449
- Determination (WENDEL)
1933, 102, 47
- , aeration method (SCOTT)
1936, 114, lxxxvii
- l*- β -3-Indole- and *dl*- β -3-indole-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG)
1934, 104, 675
- Ionization (NIMS and SMITH)
1935, 109, lxx
1936, 113, 145
- Liver (BOTT and WILSON)
1935, 109, 463
- , formation (BOTT and WILSON)
1935, 109, 455

Lactic acid—continued:

- Mandelic acid, configurational relationship (KUNA and LEVENE) 1937, 118, 315
- Metabolism, uric acid excretion, relation (QUICK) 1934, 105, lxi
- Racemizing enzyme, *Clostridium butylicum* (CHRISTENSEN, PETERSON, and JOHNSON) 1938, 123, xxi
- Utilization, mammary gland, lactating (GRAHAM) 1937-38, 122, 1
- Lactobacillus acidophilus:** Fat, neutral (CROWDER and ANDERSON) 1934, 104, 399
- Phosphatide fraction (CROWDER and ANDERSON) 1934, 104, 487
- Lactobiose:** Reactions, new (BERGMANN and GRAFE) 1935, 110, 173
- Lactoflavin:** Extraction and stability (BISBEY and SHERMAN) 1935-36, 112, 415
- Growth effect (ITTER, ORENT, and McCOLLUM) 1935, 108, 579
- Oxidation-reduction potentials (BARRON and HASTINGS) 1934, 105, vii
- Preparation (ITTER, ORENT, and McCOLLUM) 1935, 108, 579
- Semiquinone (MICHAELIS and SCHWARZENBACH) 1938, 123, lxxxiv
- Tissue metabolism, effect (MUUS, BESSEY, and HASTINGS) 1937, 119, lxxii

Lactoflavin—continued:

- Vitamin-free diets, contaminant (SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER) 1936, 113, 787
- Lactogenic hormone:** Extraction, various methods (BERGMAN and TURNER) 1937, 118, 247
- Extracts, chemistry (McSHAN and FRENCH) 1937, 117, 111
- Milk composition, effect (BERGMAN and TURNER) 1937, 120, 21
- Lactose:** *p*-Aminophenol β -glycosides, synthesis (BABERS and GOEBEL) 1934, 105, 473
- Blood plasma, pregnancy and lactation (HUBBARD and BROCK) 1935, 110, 411
- Containing diet, cataract from, blood sugar, effect (DAY) 1935, 109, xxvi
- Glycogen formation and retention, effect (DEUEL, MACKAY, JEWEL, GULICK, and GRUNEWALD) 1933, 101, 301
- Ketolytic action, other sugars, comparison (BUTTS) 1934, 105, 87
- Milk, utilization, fat relation (SCHANTZ, ELVEHJEM, and HART) 1937-38, 122, 381
- Lapachol:** Oxidation-reduction (BALL) 1936, 114, 649
- Laparotomy:** Blood plasma proteins, effect (CHANUTIN, HORTENSTINE, COLE, and LUDEWIG) 1938, 123, 247

Lard: Fatty acids and esters, nutritive value (LEPKOVSKY, OUER, and EVANS)

1935, 108, 431

Latex: Fig tree, proteolytic enzyme in (ROBBINS and LAMSON) 1934, 106, 725

Lead: Biological and organic materials, microchemical detection (SULKOWITCH)

1934, 105, lxxxviii

— materials, determination (HORWITT and COWGILL)

1937, 119, 553

Blood (WILLOUGHBY and WILKINS) 1938, 124, 639

Cerebrospinal fluid (RABINOWITCH, DINGWALL, and MACKAY) 1933, 103, 725

— —, detection, spectrographic (RABINOWITCH, DINGWALL, and MACKAY)

1933, 103, 707

— —, determination (RABINOWITCH, DINGWALL, and MACKAY)

1933, 103, 707

Dietary, minute amounts, absorption (HORWITT and COWGILL) 1938, 123, lxi

— — —, effect (HORWITT and COWGILL) 1937, 119, li

Urine, microdetermination (ROSS and LUCAS)

1935, 111, 285

Leaf: Carotene (MACKINNEY)

1935, 111, 75

—, properties (MACKINNEY) 1935, 108, 45

Fat and sterol metabolism (MACLACHLAN)

1936, 114, 185

Leaf—continued:

Starch, isolation and properties (SPOEHR and MILNER)

1935, 111, 679

Tissue, apple tree, starch polysaccharide, isolation and properties (NIEMANN, ANDERSON, and LINK)

1936, 116, 447

Lecithin(s): Blood plasma and red blood cells, adults (KIRK)

1938, 123, 637

— —, red blood cells, and tissues, microdetermination (KIRK) 1938, 123, 623

Brain, origin (McCONNELL and SINCLAIR) 1937, 118, 131

-Cephalin fraction, milk, fatty acids (KURTZ, JAMIESON, and HOLM)

1934, 106, 717

Electrometric titration (JUKES)

1934, 107, 783

Liver lipids, effect (RUBIN, PRESENT, and RALLI)

1937, 121, 19

Yeast (SALISBURY and ANDERSON) 1935-36, 112, 541

Lemon: Tree, gum (ANDERSON, RUSSELL, and SEIGLE)

1936, 113, 683

Leprosin: Composition (ANDERSON, CROWDER, NEWMAN, and STODOLA)

1936, 113, 637

1936, 114, iii

Leprosol: α - and β -, isolation (CROWDER, STODOLA, and ANDERSON)

1936, 114, 431

Leprosy: Malnutrition effect (LAMB) 1935, 109, li

- Leprosy bacillus:** Fat, acetone-soluble (ANDERSON, REEVES, and CROWDER) 1937, 121, 669
- Leucine:** Absorption rate, gastrointestinal tract (CHASE and LEWIS) 1934, 106, 315
- Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1936, 114, 85
- dl*-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 120, 289
- Growth relation (WOMACK and ROSE) 1936, 116, 381
- Iso-, *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1936, 114, 85
- , growth relation (WOMACK and ROSE) 1936, 116, 381
- , metabolism (CARTER) 1935, 108, 619
- , phenyl derivatives, synthesis (CARTER) 1935, 108, 619
- dl*-Iso-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 120, 289
- Isomers, absorption rate, gastrointestinal tract (CHASE and LEWIS) 1934, 106, 315
- Nor-, 3-aminoheptane, configurational relationship (LEVENE and KUNA) 1937-38, 122, 291
- , 2-aminoheptane, configurational correlation (LEVENE and MARDASHEW) 1937, 117, 707
- , growth relation (WOMACK and ROSE) 1936, 116, 381
- Leucine—continued:**
- Nor-, metabolism (CARTER) 1935, 108, 619
- , phenyl derivatives, synthesis (CARTER) 1935, 108, 619
- dl*-Nor-, fate (BUTTS, BLUNDEN, and DUNN) 1937, 120, 289
- Leucocyte:** See Blood cell, white
- Leuconostoc mesenterioides:** Peptidases (BERGER, JOHNSON, and PETERSON) 1938, 124, 395
- Leucopenia:** Diet relation, monkey (DAY, LANGSTON, and SHUKERS) 1936, 114, xxv
- Leucyl peptidase:** Magnesium-activated, erepsin, animal (JOHNSON, JOHNSON, and PETERSON) 1936, 116, 515
- Levulinic acid:** Formation, lycopene ozonization (STRAIN) 1933, 102, 151
- Levulinic aldehyde:** Formation, lycopene ozonization (STRAIN) 1933, 102, 151
- Levulose:** See Fructose
- Liebermann-Burchard:** Reaction, blood sterol nature, relation (REINHOLD) 1934, 105, lxxi
- , sterols, spectrophotometric studies (MORGAREIDGE) 1935, 109, lxxvii
- Light:** Comb response, testicle hormone, relation (KOCH and GALLAGHER) 1934, 105, xlix

Light—continued:

Fruit, carotene and vitamin A,
effect (SMITH and MORGAN)
1933, 101, 43

See also Ultraviolet light

Lignin: Feces, determination
(WILLIAMS and OLMSTED)
1935, 108, 653

Oat straw (PHILLIPS and GOSS)
1936, 114, 557

Wheat straw (PHILLIPS and
GOSS) 1938, 125, 241

Limulus polyphemus: Hemocyanin,
cyanide reaction
(PEARSON)

1936, 115, 171

—, prosthetic group (CONANT,
DERSCH, and MYDANS)
1934, 107, 755

—, sulfur distribution and
basic amino acids (MAZUR)
1937, 118, 631

Muscle, organic phosphates,
distribution (ENGEL and
CHAO) 1935, 108, 389

Linoleic acid: Butter fat (ECK-
STEIN) 1933, 103, 135

Linolenic acid: Butter fat (ECK-
STEIN) 1933, 103, 135

Linseed meal: Toxicity (McCAY
and TUNISON)
1938, 123, lxxx

Lipase: Action, blood serum (Mc-
GUIRE and FALK)
1934, 105, 373

—, — —, horse (FALK and
McGUIRE) 1934, 105, 379

Fungus, activity (KIRSH)
1935, 108, 421

Pancreas (WEINSTEIN and
WYNNE)

1935-36, 112, 641

Lipase—continued:

Pancreas, action (BALLS and
MATLACK) 1938, 123, 679

—, activity, factors influenc-
ing (WEINSTEIN and
WYNNE)
1935-36, 112, 649

—, crude, glyceride hydrolysis
(BALLS, MATLACK, and
TUCKER)

1937-38, 122, 125

—, specificity and inhibition
(WEBER and KING)
1935, 108, 131

—, vitamin B deficiency in-
fluence (SURE, KIK, and
BUCHANAN)

1935, 108, 27

Pneumococcus, Type I, effect
(McGUIRE and FALK)
1934, 105, 669

Protease effect (FALK)
1933, 103, 363

Tissue, rickets (FALK and Mc-
GUIRE) 1935, 108, 61

Lipemia: Alimentary, blood lipid,
total, and iodine number,
effect (WILSON and HAN-
NER) 1934, 106, 323

Streptococcus viridans infec-
tion, rabbits (BOYD, ORR,
and REED)

1938, 124, 409

Variations (MAN and GILDEA)
1937, 119, 769

Lipid(s): Acetyl values, deter-
mination (WEST, HOAGLAND,
and CURTIS)

1934, 104, 627

Animal (THANNHAUSER and
REICHEL) 1936, 113, 311
(THANNHAUSER and SETZ)

1936, 116, 527, 533

Lipid(s)—continued:

- Bacterium tumefaciens* (CHARGAFF and LEVINE)
1938, 124, 195
- Blood, age, sex, and ovarian activity, effect (LORENZ, ENTENMAN, and CHAIKOFF)
1937-38, 122, 619
- , androgens, effect (KOCHAKIAN, MACLACHLAN, and McEWEN) 1937-38, 122, 433
- , anticoagulants, effect (BOYD and MURRAY)
1937, 117, 629
- cell, microdetermination, gasometric (KIRK, PAGE, and VAN SLYKE)
1934, 106, 203
- —, red, extraction (BOYD)
1936, 115, 37
- —, —, posthemolytic residue, distribution (ERICKSON, WILLIAMS, BERNSTEIN, AVRIN, JONES, and MACY)
1937-38, 122, 515
- —, white (BOYD)
1933, 101, 623
(BOYD and STEVENSON)
1937, 117, 491
- clotting, relation (CHARGAFF, BANCROFT, and STANLEY-BROWN)
1936, 116, 237
(CHARGAFF)
1937, 121, 175
- , depancreatized dog, insulin effect (CHAIKOFF and KAPLAN)
1934, 106, 267
- , — — with insulin, pancreas ingestion effect (CHAIKOFF and KAPLAN)
1935-36, 112, 155

Lipid(s)—continued:

- Blood, determination and partition (ROSE, SCHATTNER, and EXTON)
1937, 119, lxxxiv
- , distribution, anemia, children (ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY)
1935, 109, xxx
(ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY)
1937, 118, 569
- , —, —, pernicious (WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY)
1937, 118, 599
- , —, children (ERICKSON, WILLIAMS, HUMMEL, and MACY)
1937, 118, 15
- , extraction (BOYD)
1936, 114, 223
- , — and saponification (MAN and GILDEA)
1937-38, 122, 77
- , fasting effect (SURE, KIK, and CHURCH)
1933, 103, 417
- , liver damage influence (CHANUTIN and LUDEWIG)
1936, 114, xviii
- , overfeeding effect (BLOOR)
1933, 103, 699
- plasma, age effect (PAGE, KIRK, LEWIS, THOMPSON, and VAN SLYKE)
1935, 111, 613
- —, analysis, microoxidative (BOYD) 1933, 101, 323
- —, determination, gasometric (KIRK, PAGE, and VAN SLYKE) 1934, 105, xlvii

Lipid(s)—continued:

- Blood plasma, diurnal variations (BOYD) 1935, 110, 61
- —, microdetermination (STREET) 1936, 116, 25
- —, —, gasometric (KIRK, PAGE, and VAN SLYKE) 1934, 106, 203
- platelets, distribution (ERICKSON, LEE, and WILLIAMS) 1938, 123, xxxiv
- , regeneration, hemorrhage effect (BOYD and STEVENSON) 1937-38, 122, 147
- serum (WILSON and HANSEN) 1935-36, 112, 457
- —, extraction and saponification (MAN and GILDEA) 1937-38, 122, 77
- —, fat metabolism, intermediary, relation (HANSEN, WILSON, and WILLIAMS) 1936, 114, 209
- —, protein-low diet, effect (PAGE, FARR, and WEECH) 1937, 121, 111
- , thyroxine injection effect (SCHMIDT and BRADFORD) 1934, 105, lxxv
- Bound, tubercle bacillus, human (ANDERSON, REEVES, and STODOLA) 1937, 121, 649
- Chlorine, blood and tissues (CHRISTENSEN and CORLEY) 1938, 123, 129
- Dietary, milk fat effect (MUELLER and COX) 1938, 123, lxxxviii
- Extracts, storage effect (BOYD) 1937, 121, 485

Lipid(s)—continued:

- Feces, determination and partition (TIDWELL and HOLT) 1935-36, 112, 605
- Fractions, *Bacterium tumefaciens*, chemistry (CHARGAFF) 1938, 123, xxi
- Gingival tissue (HODGE) 1933, 101, 55
- Jelly, Wharton (BOYD) 1935, 111, 667
- Liver, cholesterol-fed rats, undernutrition and vitamin deficiency, effect (OKEY and GILLUM) 1935, 109, lxxii
- , depancreatized dog, insulin and pancreas feeding, effect (KAPLAN and CHAIKOFF) 1937, 119, 435
- , — —, — effect (KAPLAN and CHAIKOFF) 1935, 108, 201
- , fat diet, effect (RUBIN, PRESENT, and RALLI) 1937, 121, 19
- , fowl (LORENZ, CHAIKOFF, and ENTENMAN) 1938, 123, 577
- , sex differences (OKEY, GILLUM, and YOKELA) 1934, 107, 207
- Metabolism, blood and liver, depancreatized dog, insulin and choline, effect (KAPLAN and CHAIKOFF) 1937, 120, 647
- Milk (KURTZ, JAMIESON, and HOLM) 1934, 106, 717
- Muscle dystrophy (MORGULIS, WILDER, SPENCER, and EPPSTEIN) 1938, 124, 755
- , function, relation (BLOOR and SNIDER) 1934, 105, x

Lipid(s)—continued:

- Nerve, arteriosclerosis and diabetes, effect (RANDALL)
1938, 125, 723
- Ovary, pregnancy, relation (BOYD)
1935, 108, 607
1935-36, 112, 591
- Partition, blood cell, red, post-hemolytic residue (ERICKSON, WILLIAMS, BERNSTEIN, and JONES)
1936, 114, xxxii
- Reabsorption, bowel (RONY, MORTIMER, and IVY)
1933, 102, 161
- Saponifiable, sterol metabolism, effect (ECKSTEIN)
1938, 125, 99
- Secretion, bowel (RONY, MORTIMER, and IVY)
1933, 102, 161
- Skin, diabetes (MATTHEWS, NEWTON, and BLOOR)
1935, 108, 145
- , steer, distribution (KOPPENHOEFER)
1936, 116, 321
- Spleen, blood clotting inhibitor (CHARGAFF)
1938, 125, 677
- Thoracic duct lymph (REISER)
1937, 120, 625
- — —, fasting (RONY, MORTIMER, and IVY)
1933, 102, 161
- Tissue, cholesterol ingestion effect (CHANUTIN and LUDEWIG)
1933, 102, 57
- , frog, hypertrophy relation (BOYD)
1937, 121, 783
- , microdetermination, gasometric (KIRK, PAGE, and VAN SLYKE)
1934, 106, 203

Lipid(s)—continued:

- Tissue, thyroxine injection effect (SCHMIDT and BRADFORD)
1934, 105, lxxv
- Tobacco seed, Connecticut shade-grown (SALISBURY)
1937, 117, 21
- Total, blood, lipemia, alimentary, effect (WILSON and HANNER)
1934, 106, 323
- , mitochondria, dibenzanthracene effect (GOERNER)
1937-38, 122, 529
- Tubercle bacillus, chemistry (PANGBORN and ANDERSON)
1933, 101, 105
(ANDERSON and NEWMAN)
1933, 101, 499, 773
1933, 103, 197, 405
(NEWMAN, CROWDER, and ANDERSON)
1934, 105, 279
(SPIELMAN)
1934, 106, 87
(SPIELMAN and ANDERSON)
1935-36, 112, 759
(ANDERSON, CROWDER, NEWMAN, and STODOLA)
1936, 113, 637
(CROWDER, STODOLA, and ANDERSON)
1936, 114, 431
(STODOLA and ANDERSON)
1936, 114, 467
(REEVES and ANDERSON)
1937, 119, 535, 543
(CASON and ANDERSON)
1937, 119, 549
(ANDERSON, REEVES, and STODOLA)
1937, 121, 649
(ANDERSON, REEVES, and CROWDER)
1937, 121, 669

Lipid(s)—*continued*:

(ANDERSON, LOTHROP, and
CREIGHTON)

1938, 125, 299

Unsaturated, sterol metabo-
lism, effect (ECKSTEIN)

1938, 125, 99

Yeast, chemistry (NEWMAN
and ANDERSON)

1933, 102, 219, 229

(SALISBURY and ANDERSON)

1935-36, 112, 541

See also Phospholipids

Lipoid-chlorine: Blood serum
(PETERS and MAN)

1934, 107, 23

Lipoid phosphorus: Determina-
tion (MAN and PETERS)

1933, 101, 685

Hearts and kidneys, hypertro-
phied (LUDEWIG and CHA-
NUTIN)

1936, 115, 327

Phosphate conversion, tissues,
radioactive phosphorus as in-
dicator (ENTENMAN, RUBEN,
PERLMAN, LORENZ, and
CHAIKOFF)

1938, 124, 795

Lipolysis: Enzymes (SOBOTKA
and GLICK)

1934, 105, 221

—, action (SOBOTKA and
GLICK)

1934, 105, 199

—, adrenals, distribution
(GLICK and BISKIND)

1935, 110, 575

Lipopeptides: Physical chemistry
(VAN ORMONDT)

1936, 114, lxxvii

Lipoproteins: Protamine salts,
phosphatides, relation
(CHARGAFF)

1938, 125, 661

Lipotropic agent: Pancreas (AYL-
WARD and HOLT)

1937, 121, 61

Liquor folliculi: Estrogenic sub-
stance isolation (MACCOR-
QUODALE, THAYER, and
DOISY)

1936, 115, 435

Lithocholic acid: Gallstones, hog
bile (SCHOENHEIMER and
JOHNSTON)

1937, 120, 499

Preparation from cholesterol
(SCHOENHEIMER and BER-
LINER)

1936, 115, 19

Liver: Acetoacetic acid reduction
to β -hydroxybutyric acid in,
malonic acid effect (STARK
and COHEN)

1938, 123, cxv

Aminopropionic acid deamina-
tion, oxidative (RODNEY and
GARNER)

1938, 125, 209

Anemia, pernicious, principle,
chemical study (SUBBAROW
and JACOBSON)

1936, 114, cii

Arginase, activation, metal
ions, rôle (HELLERMAN and
STOCK)

1938, 125, 771

—, age effect (LIGHTBODY)

1938, 124, 169

—, myasthenia gravis (MIL-
HORAT)

1935, 111, 379

Ascorbic acid oxidation, effect
(STOTZ, HARRER, SCHULTZE,
and KING)

1937-38, 122, 407

Beef, hemoglobin regeneration
influence (ROSE, VAHLTEICH,
and MACLEOD)

1934, 104, 217

Liver—continued:

- Carbohydrate storage, under-nutrition effect (JOHNSTON and NEWBURGH) 1937, 119, liv
- Carotene stability (McDONALD) 1933, 103, 455
- Catalase (DUNN and MORGULIS) 1937, 118, 545
- Cholesterol, yeast-containing diets, nephrectomy, effect (HORTENSTINE, CHANUTIN, and LUDEWIG) 1938, 125, 455
- Cirrhosis, liver preparation, effect (FORBES) 1938, 123, xxxvii
- Creatine, thyroid and thyroxine effect (BODANSKY) 1935, 109, 615
- Damage, blood lipids, influence (CHANUTIN and LUDEWIG) 1936, 114, xviii
- Disease, uric acid excretion, benzoic acid influence (QUICK) 1935, 110, 107
- Electrolytes and water, growth effect (YANNET and DARROW) 1938, 123, 295
- Esterase activity, hydrogen ion concentration influence (SOBOTKA and GLICK) 1934, 105, 221
- , specificity and inhibition (WEBER and KING) 1935, 108, 131
- Extract, anemia potency determination (CLARK and COENE) 1936, 114, xix
- , dietary factor, essential (ELVEHJEM, KOEHN, and OLESON) 1936, 114, xxxi

Liver—continued:

- Extract, glycogen hydrolysis (CARRUTHERS) 1935, 108, 535
- Fat, cholesterol and choline effect (BEST and RIDOUT) 1936, 114, ix
- , depancreatized dog, insulin effect (CHAIKOFF and KAPLAN) 1937, 119, 423
- , ketonuria relation (DEUEL, HALLMAN, and MURRAY) 1937, 119, xxii
- , source (BARRETT, BEST, and RIDOUT) 1938, 123, iii
- , water storage, relation (KAPLAN and CHAIKOFF) 1936, 116, 663
- Fatty acids, total, yeast-containing diets, nephrectomy effect (HORTENSTINE, CHANUTIN, and LUDEWIG) 1938, 125, 455
- , dietary production (BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER) 1933, 103, 93
- , ketonuria, fasting, relation (DEUEL, HALLMAN, and MURRAY) 1937, 119, 257
- , methione and cystine effect (TUCKER and ECKSTEIN) 1937, 121, 479
- , overfeeding effect, goose (FLOCK, BOLLMAN, HESTER, and MANN) 1937, 119, xxxiii
- 1937, 121, 117
- Flavin, preparation and properties (STARE) 1935, 109, lxxxviii

Liver—continued:

- Function, anemia, hemoglobin production, nitrogen metabolism, liver injury by chloroform, relation (DAFT, ROBSCHT-ROBBINS, and WHIPPLE) 1936, 113, 391
- Glucose, hexoses and trioses, relation (CORI and SHINE) 1936, 114, xxi
- Glycogen (HRUBETZ and DOTI) 1934, 107, 731
- and fat content, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER) 1934, 104, 519
- , diurnal changes (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN) 1938, 123, 257
- , low oxygen pressure, effect (EVANS) 1934, 105, xxvi
- , molecular structure (HASID and CHAIKOFF) 1938, 123, 755
- , sexual variation, age effect (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN) 1937, 119, 617
- , water storage, relation (KAPLAN and CHAIKOFF) 1936, 116, 663
- Glycogenase, insulin effect (VOLLMAR and KOEHLER) 1936, 114, cvi
- Growth factor (KLINE, ELVEHJEM, KEENAN, and HART) 1934, 107, 107
- Hematopoietic substance, chemistry (DAKIN and WEST) 1935, 109, 489 (DAKIN, UNGLEY, and WEST) 1936, 115, 771

Liver—continued:

- Hypert thyroidism, function (BUELL and STRAUSS) 1934, 105, xiv
- Injury, blood lactic acid and (HAHN) 1933, 101, 29
- , — serum phosphatase relation (BODANSKY) 1938, 123, xiv
- , carbon tetrachloride, fat metabolism effect (WINTER) 1938, 124, 339
- Iron distribution, peptic digestion and autolysis (McFARLANE) 1934, 106, 245
- Ketogenesis and ketolysis (COHEN and STARK) 1938, 123, xxiii
- Lactic acid (BOTT and WILSON) 1935, 109, 463
- — formation (BOTT and WILSON) 1935, 109, 455
- Lipids, cholesterol-fed rats, undernutrition and vitamin deficiency, effect (OKEY and GILLUM) 1935, 109, lxxii
- , depancreatized dog, insulin and pancreas feeding, effect (KAPLAN and CHAIKOFF) 1937, 119, 435
- , — — effect (KAPLAN and CHAIKOFF) 1935, 108, 201
- , fat diet, effect (RUBIN, PRESENT, and RALLI) 1937, 121, 19
- , fowl (LORENZ, CHAIKOFF, and ENTENMAN) 1938, 123, 577
- , metabolism, depancreatized dog, insulin and choline, effect (KAPLAN and CHAIKOFF) 1937, 120, 647

Liver—continued:

- Lipids, sex differences (OKEY, GILLUM, and YOKELA) 1934, 107, 207
- Peroxidase (DUNN and MORGULIS) 1937, 118, 545
- Phenylalanine oxidation (BERNHEIM and BERNHEIM) 1934, 107, 275
- Phosphate compounds, autolysis effect (FLOCK) 1936, 115, 207
- —, diet effect (FLOCK, BOLLMAN, and MANN) 1936, 114, xxxvi
1936, 115, 179
- —, substances affecting (FLOCK, BOLLMAN, and MANN) 1936, 115, 201
- Phospholipid, fat metabolism relation (SINCLAIR) 1935, 111, 515
- Poisons, parathyroid extract, influence (GREENBERG) 1935, 109, xxxviii
- Proteins, crystallizable (DOUNCE and SUMNER) 1938, 124, 415
- , extractability, hydrogen ion concentration, effect (LUCK and NIMMO) 1937, 119, lxxv
- , fasting effect (ADDIS, POO, and LEW) 1936, 115, 117
- , heat and alcohol, effect (SEEGERS and MATTILL) 1935, 110, 531
- , potassium iodate effect (LUCK) 1938, 123, lxxvii
- , storage (LUCK) 1936, 115, 491

Liver—continued:

- Proteins, water storage, relation (KAPLAN and CHAIKOFF) 1936, 116, 663
- Respiration, normal and scorbutic animals (STOTZ, HARRER, SCHULTZE, and KING) 1937, 120, 129
- Tumors, 2-amino-5-azotoluene, relation (SHEAR) 1936, 114, xc
- Tyrosine oxidation (BERNHEIM and BERNHEIM) 1934, 107, 275
- dl*-Tyrosine oxidation (BERNHEIM) 1935, 111, 217
- l*-Tyrosine oxidation (BERNHEIM) 1935, 111, 217
- Vitamin G (BLOCK and FARQUHAR) 1933, 103, 643
- Water and electrolytes, growth effect (YANNET and DARROW) 1938, 123, 295
- storage, glycogen, fat, and protein, relation (KAPLAN and CHAIKOFF) 1936, 116, 663
- —, — relation (MACKAY and BERGMAN) 1934, 105, 59
- Xanthine oxidase, *p*-aminophenol action (BERNHEIM and BERNHEIM) 1938, 123, 307
- See also* Hepatectomy
- Livetin:** Amino acid fractionation (JUKES) 1933, 103, 425
- Lobster:** Egg, ovoverdin (STERN and SALOMON) 1937-38, 122, 461
- Lomatiol:** Oxidation-reduction (BALL) 1936, 114, 649

- Lung:** Inflammatory exudates, cellular proteinase and peptidase activity (WEISS, KAPLAN, and LARSON) 1938, 125, 247
- Lupinus albus:** Fat oxidation system (CRAIG) 1936, 114, 727
- Lycopene:** Ozonization, levulinic acid and levulinic aldehyde formation (STRAIN) 1933, 102, 151
- Lycopersicum esculentum:** See Tomato
- Lymph:** Acacia determination (POWER) 1937, 119, lxxviii
- Aqueous humor, cerebrospinal fluid, and blood, comparison (WALKER) 1933, 101, 269
- Glycerol ester, fat-soluble, microdetermination (FREEMAN and FRIEDEMANN) 1935, 108, 471
- Inorganic phosphate, frog and higher animals (WALKER) 1933, 101, 269
- Reducing substances, frog and higher animals (WALKER) 1933, 101, 269
- Thoracic duct, lipids (REISER) 1937, 120, 625
- , —, —, fasting (RONY, MORTIMER, and IVY) 1933, 102, 161
- , galactose (FAY and WHARTON) 1935, 109, 695
- Urea, frog and higher animals (WALKER) 1933, 101, 269
- Lymph—continued:**
- Uric acid, frog and higher animals (WALKER) 1933, 101, 269
- Lysergic acid:** (JACOBS and CRAIG) 1934, 104, 547
1934, 106, 393
1935, 111, 455
- Dihydro-, isomer (JACOBS and CRAIG) 1936, 115, 227
- Isomer, structure (CRAIG, SHEDLOVSKY, GOULD, and JACOBS) 1938, 125, 289
- Related substances, synthesis (JACOBS and GOULD) 1937, 120, 141
- Structure (JACOBS and CRAIG) 1936, 113, 767
1936, 115, 227
(CRAIG, SHEDLOVSKY, GOULD, and JACOBS) 1938, 125, 289
- Lysine:** *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1937, 118, 363
- Casein, dry heat and alkali effect (BLOCK, JONES, and GERSDORFF) 1934, 105, 667
- d*-, growth and (HAMMETT) 1937, 119, xlv
- , monohydrochloride, absorption rate (DOTY and EATON) 1937-38, 122, 139
- dl*-, resolution (BERG) 1936, 114, viii
1936, 115, 9
- , synthesis (ECK and MARVEL) 1934, 106, 387

Lysine—continued:

- Fatty acids, combination
(JUKES and SCHMIDT)
1935, 110, 9
- l*-, peptides, papain effect
(BERGMANN, ZERVAS, and
ROSS) 1935, 111, 245
- , —, synthesis (BERGMANN,
ZERVAS, and ROSS)
1935, 111, 245
- α -N-Monomethyl-, and α -N-
dimethyl-, growth avail-
ability (GORDON)
1937, 119, xxxvii
- Peptides, nitrous acid, be-
havior (GREENSTEIN)
1933, 101, 603
- , physical constants (GREEN-
STEIN) 1933, 101, 603
- Lyszyme:** Action, mechanism
(MEYER, PALMER, THOMP-
SON, and KHORAZO)
1936, 113, 479
- Purification and proper-
ties (MEYER, THOMPSON,
PALMER, and KHORAZO)
1936, 113, 303
- Lysylglutamic acid:** Derivatives,
synthesis (GREENSTEIN)
1935, 109, 541

M

- Macromolecular solids:** Long
spacings (COREY and WYCK-
OFF) 1936, 114, 407
- Magnesium:** -Activated leucyl
peptidase, erepsin, animal
(JOHNSON, JOHNSON, and
PETERSON)
1936, 116, 515

Magnesium—continued:

- Biological fluids, determina-
tion, colorimetric, Kolthoff
method (HIRSCHFELDER and
SERLES) 1934, 104, 635
- —, —, spectrographic
(THOMSON and LEE)
1937, 118, 711
- Blood distribution (EVELETH)
1937, 119, 289
- plasma, renal insufficiency,
magnesium sulfate ingestion
effect (HIRSCHFELDER)
1934, 104, 647
- serum (BENJAMIN, HESS,
and GROSS)
1933, 103, 383
- —, determination, colori-
metric (HOFFMAN)
1937, 118, 37
- Body, growth and develop-
ment, relation (GREENBERG
and TUFTS)
1936, 114, 135
- Calf, study (DUNCAN, HUFF-
MAN, and ROBINSON)
1935, 108, 35
- Deficiency, biochemistry
(GREENBERG and TUFTS)
1937, 119, xl
(TUFTS and GREENBERG)
1937-38, 122, 693
- , bone and blood effect
(ORENT, KRUSE, and Mc-
COLLUM) 1934, 106, 573
- , mineral metabolism effect
(KRUSE, SCHMIDT, and
McCOLLUM)
1934, 106, 553
- with calcium deficiency,
blood and body effect (DAY,
KRUSE, and McCOLLUM)
1935-36, 112, 337

Magnesium—*continued*:

Excretion, renal insufficiency,
magnesium sulfate ingestion
effect (HIRSCHFELDER)

1934, 104, 647

Gestation requirement, calcium
relation (TUFTS and GREEN-
BERG)

1937-38, 122, 715

Growth requirement, calcium
relation (TUFTS and GREEN-
BERG)

1937-38, 122, 715

Kidney and intestinal phos-
phatases, effect (BODANSKY)

1936, 115, 101

Lactation requirement, calcium
relation (TUFTS and GREEN-
BERG)

1937-38, 122, 715

-Low diet, effect (GREENBERG
and TUFTS)

1935, 109, xxxviii

— —, tissue changes (GREEN-
BERG, ANDERSON, and
TUFTS)

1936, 114, xliii

Milk (BENJAMIN, HESS, and
GROSS)

1933, 103, 383

Tissues, determination
(GREENBERG, ANDERSON,
and TUFTS)

1935, 111, 561

Urine, determination (GREEN-
BERG, ANDERSON, and
TUFTS)

1935, 111, 561

Magnesium citrate: Ionization
(HASTINGS, McLEAN, EICH-
ELBERGER, HALL, and DA
COSTA)

1934, 107, 351

Magnesium sulfate: Blood
plasma and urine magne-
sium, renal insufficiency, in-
gestion effect (HIRSCH-
FELDER)

1934, 104, 647

Maize: Pigments (SANDO, MIL-
NER, and SHERMAN)

1935, 109, 203

Purple-husked, chrysanthemin
(SANDO, MILNER, and SHER-
MAN)

1935, 109, 203

See also Corn

Malic acid: Plant tissue, deter-
mination (PUCHER, VICK-
ERY, and WAKEMAN)

1934, 105, lxviii

Rhubarb (PUCHER, CLARK,
and VICKERY)

1937, 117, 599

Tobacco leaves (PUCHER,
CLARK, and VICKERY)

1937, 117, 599

Malnutrition: Leprosy, effect
(LAMB)

1935, 109, li

Malonic acid: Acetoacetic acid
reduction to β -hydroxybuty-
ric acid in liver, effect (STARK
and COHEN)

1938, 123, cvx

Malt: Amylase, purification and
properties (SHERMAN, CALD-
WELL, and DOEBBELING)

1934, 104, 501

—, ultrafiltration (SNELL)

1934, 104, 43

Barley, amylase, concentration
and properties (CALDWELL
and DOEBBELING)

1935, 110, 739

Maltose: *p*-Aminophenol β -gly-
cosides, synthesis (BABERS
and GOEBEL)

1934, 105, 473

-Containing mixtures, glucose
microdetermination (So-
MOGYI)

1937, 119, 741

Maltose—continued:

Fermentation, yeast activators
(BLISH and SANDSTEDT)

1937, 118, 765

Malus malus: See Apple tree

Mammary gland: Blood nitrogen
partition, fractions, utilization
(GRAHAM, PETERSON,
HOUCHIN, and TURNER)

1937-38, 122, 275

Lactating, lactic acid utilization
(GRAHAM)

1937-38, 122, 1

Proteins (JACKSON and GORTNER)

1938, 123, 719

Urea production (GRAHAM,
HOUCHIN, and TURNER)

1937, 120, 29

Mandelic acid: Lactic acid, configurational relationship
(KUNA and LEVENE)

1937, 118, 315

Manganese: Perosis-preventing
properties (GALLUP and
NORRIS)

1937, 119, xxxvi

Mannitan: Fate (CARR, MUSSER,
SCHMIDT, and KRANTZ)

1933, 102, 721

Mannitol: Fate (CARR, MUSSER,
SCHMIDT, and KRANTZ)

1933, 102, 721

(CARR and KRANTZ)

1938, 124, 221

Metabolism (CARR, FORMAN,
and KRANTZ)

1938, 123, xviii

Mannoheptulose: *d*-, utilization
(ROE and HUDSON)

1935-36, 112, 443

Mannoketoheptose: *d*-, utilization
(ROE and HUDSON)

1935-36, 112, 443

Mannosaccharic acid: *l*-, *l*-mannuronic acid synthesis from
(NIEMANN, McCUBBIN, and
LINK) 1934, 104, 737

Mannose: *d*-, crystalline, preparation
(LEVENE)

1935, 108, 419

—, metabolism (DEUEL, HALLMAN,
MURRAY, and HILLIARD)

1938, 125, 79

Mannose-1-phosphoric acid:
Synthesis (COLOWICK)

1938, 124, 557

Mannuronic acid: *d*-, *p*-bromophenylhydrazine derivatives
(NIEMANN, SCHOEFFEL, and
LINK) 1933, 101, 337

l-, *l*-mannosaccharic acid synthesis
(NIEMANN, McCUBBIN, and LINK)

1934, 104, 737

Marine products: (BERGMANN)

1934, 104, 317, 553

1937, 117, 777

1937, 118, 499

Marinobufagin: Chemical constitution
(JENSEN)

1937, 119, lii

Marsh dodder: Plastid pigments
(MACKINNEY)

1935-36, 112, 421

Mechanical vibration: Pepsin activity, influence
(CHAMBERS) 1937, 117, 639

Meconium: Bilirubin determination, oxidative, photoelectric colorimeter
(MALLOY and EVELYN)

1937-38, 122, 597

Melanins: Ultraspectrographic studies
(SPIEGEL-ADOLF)

1938, 123, cxiv

Melilotic acid: Plant tissue, determination (ROBERTS and LINK) 1937, 119, 269

Membrane: Molecular sieve (BEUTNER, CAPLAN, and LOEHR) 1933, 101, 391

Mendel, Lafayette Benedict: Obituary, 1935-36, 112, preceding p. 431

Menopause: Urine follicle-stimulating hormone (BLOCK, BRAND, HARRIS, and HINSIE) 1936, 114, xii

Menstrual cycle: Urine estrogenic substances, determination (GUSTAVSON, HAYS, and WOOD) 1937, 119, xlii

Mercaptals: Semi-, amino compounds, reactions (SCHUBERT) 1937, 121, 539

Mercaptan(s): N,N'-Diphenylformazyl and N,N'-diphenyldihydroformazyl, lead detection, microchemical, biological and organic materials (SULKOWITCH)

1934, 105, lxxxviii

Iodoacetic acid reaction (MICHAELIS and SCHUBERT) 1934, 106, 331

Mercapturic acid(s): Benzyl-, benzyl chloride relation, animal organism (STEKOL) 1938, 124, 129

—, S-benzylcysteine relation, animal organism (STEKOL) 1938, 124, 129

p-Bromo-, synthesis, body weight relation (STEKOL)

1937, 121, 93

Mercapturic acid(s)—continued:

p-Bromophenyl-, synthesis, body weight, relation (STEKOL)

1937, 119, xciv

—, —, diet effect (STEKOL)

1937, 117, 147

—, —, fasting rabbit (CONWAY) 1937, 121, 27

—, —, food and bromobenzene relation (STEKOL)

1937, 118, 155

—, urine, determination (STEKOL) 1936, 113, 279

Synthesis, animals (STEKOL and MANN)

1937, 117, 619

(STEKOL) 1937, 121, 87

1937-38, 122, 55

—, l-cystine, dl-methionine, glutathione, and taurine, relation (STEKOL)

1937-38, 122, 333

Mercuric chloride: Amino acid compounds (VICKERY and GORDON) 1933, 103, 543

Cysteine, cystine, cysteine sulfinic acid, and cysteic acid, action (LAVINE)

1937, 117, 309

Thiol compounds, reaction (SHINOHARA)

1935, 111, 435

Mercuric reagents: Alkaline, nitrogenous substances, precipitation (EVERETT, SHEPPARD, and JOHNSON)

1934, 104, 1

Mercuric sulfate: Cysteine, cystine, cysteine sulfinic acid, and cysteic acid, action (LAVINE) 1937, 117, 309

Mercury: -Reacting titrating solution, Rehberg burette, modified, use with (LONGWELL and HILL)

1935-36, 112, 319

Mescaline: Oxidation (BERNHEIM and BERNHEIM)

1938, 123, 317

Mesocystine: Cystine-deficient diet, growth effect (LORING, DORFMAN, and DU VIGNEAUD)

1933, 103, 399

Isolation and characterization (LORING and DU VIGNEAUD)

1933, 102, 287

Mesquite: Wood, hemicelluloses (SANDS and GARY)

1933, 101, 573

(SANDS and NUTTER)

1935, 110, 17

Metabolism: (*See note on p. 221*)

Age effect (DILL, EDWARDS, and ROBINSON)

1938, 123, xxx

Amides (CARTER, HANDLER, BINKLEY, FISHBACK, RISER, and WEISIGER)

1938, 123, xx

—, green plants (VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH)

1937, 119, 369

(VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN)

1938, 125, 527

Amino acids (CHASE and LEWIS)

1934, 106, 315

(BUTTS, DUNN, and HALLMAN)

1935-36, 112, 263

(BUTTS, BLUNDEN, and DUNN)

1937, 119, 247

1937, 120, 289

Metabolism—continued:

(PAPAGEORGE and LEWIS)

1938, 123, 211

(BUTTS, DUNN, and HALLMAN)

1938, 123, 711

(BUTTS, BLUNDEN, and DUNN)

1938, 124, 709

Amino acids, basic (DOTY and EATON)

1937-38, 122, 139

Apparatus, small animals (WERTHESEN)

1937, 119, 233

Bacteria (BLANCHARD and MACDONALD)

1935, 110, 145

Basal. *See* Basal metabolism

Blood plasma protein, injection effect (DAFT, ROBSCHKEIT-ROBBINS, and WHIPPLE)

1938, 123, 87

Carbohydrate, copper effect (KEIL and NELSON)

1934, 106, 343

—, diet factor (WESSON and MURRELL)

1933, 102, 303

— factor, vegetables, boiling effect (WESSON)

1938, 123, cxxv

Carbohydrates, adrenalectomy effect (BUELL, ANDERSON, and STRAUSS)

1936, 114, xvi

—, brain (KERR)

1936, 116, 1

(KERR and GHANTUS)

1936, 116, 9

1937, 117, 217

(KERR, HAMPEL, and GHANTUS)

1937, 119, 405

(KERR and ANTAKI)

1937-38, 122, 49

(KERR)

1938, 123, 443

Metabolism—continued:

- Carbohydrates, fat-deficient diet
(WESSON and MURRELL)
1934, 105, xcix
- , galactosuria (MASON)
1934, 105, lviii
- , goat (CUTLER)
1934, 106, 653
- , hormone, anterior pituitary, assay (BERGMAN and TURNER) 1938, 123, 471
- , pancreatectomy (BARKER, CHAMBERS, and DANN)
1937, 118, 177
- , sexual variation (GULICK, SAMUELS, and DEUEL)
1934, 105, 29
- (GRUNEWALD, CUTLER, and DEUEL) 1934, 105, 35
- (BUTTS, CUTLER, and DEUEL) 1934, 105, 45
- (DEUEL, HALLMAN, MURRAY, and SAMUELS)
1937, 119, 607
- (DEUEL, BUTTS, HALLMAN, MURRAY, and BLUNDEN)
1937, 119, 617
- Carbon, *Gibberella saubinetii*
(HESSLER and GORTNER)
1937, 119, 193
- Children, dental caries (BOYD, DRAIN, and STEARNS)
1933, 103, 327
- Citric acid origin in (SHERMAN, MENDEL, and SMITH)
1936, 113, 247
- Dihalophenol effect, mechanism (CLOWES and KRAHL)
1936, 114, xix
- Dinitrophenol effect, mechanism (CLOWES and KRAHL)
1936, 114, xix

Metabolism—continued:

- Dog (STEKOL and CERECEO)
1934, 105, lxxxv
- Eskimo (RABINOWITCH)
1936, 114, lxxxii
- Exercise effect (DILL, EDWARDS, and ROBINSON)
1938, 123, xxx
- Fat, intermediary, blood serum lipids, relation (HANSEN, WILSON, and WILLIAMS)
1936, 114, 209
- , liver injury by carbon tetrachloride, effect (WINTER)
1938, 124, 339
- , — phospholipid rôle (SINCLAIR) 1935, 111, 515
- , plants (MACLACHLAN)
1936, 113, 197
- , vitamin B and (McHENRY and GAVIN)
1938, 125, 653
- , — B₁ relation (WHIPPLE and CHURCH) 1935, 109, xcvi
- Growth (STEKOL and CERECEO)
1934, 105, lxxxv
- (CERECEO and STEKOL)
1934, 107, 425
- Intermediary, deuterium as indicator (SCHOENHEIMER and RITTENBERG)
1935, 111, 163
- (RITTENBERG and SCHOENHEIMER) 1935, 111, 169
- (SCHOENHEIMER and RITTENBERG) 1935, 111, 175
- (SCHOENHEIMER, RITTENBERG, and GRAFF)
1935, 111, 183
- (SCHOENHEIMER and RITTENBERG) 1936, 113, 505
- 1936, 114, 381

Metabolism—continued:

- (SCHOENHEIMER, RITTENBERG, BERG, and ROUSSELOT) 1936, 115, 635
 (RITTENBERG and SCHOENHEIMER) 1937, 117, 485
 (SCHOENHEIMER and RITTENBERG) 1937, 120, 155
 (RITTENBERG, SCHOENHEIMER, and EVANS) 1937, 120, 503
 (RITTENBERG and SCHOENHEIMER) 1937, 121, 235
 (FOSTER, KESTON, RITTENBERG, and SCHOENHEIMER) 1938, 124, 159
 (RITTENBERG, KESTON, SCHOENHEIMER, and FOSTER) 1938, 125, 1
 (FOSTER, RITTENBERG, and SCHOENHEIMER) 1938, 125, 13
 (ANCHEL and SCHOENHEIMER) 1938, 125, 23
 Intermediary, fatty acids, deuterium as indicator (SCHOENHEIMER) 1937, 119, lxxxvii
 —, nitrogen isotope for study (SCHOENHEIMER, FOSTER, RITTENBERG, and RATNER) 1938, 123, cv
 Lipid, blood and liver, depancreatized dog with insulin, choline effect (KAPLAN and CHAIKOFF) 1937, 120, 647
 Mineral, adolescent girls, nephrotic children, and boys with pseudohypertrophic muscle dystrophy (WANG, KAUCHER, and WING) 1935, 109, xcv

Metabolism—continued:

- Mineral, magnesium deprivation effect (KRUSE, SCHMIDT, and MCCOLLUM) 1934, 106, 553
 —, radioactive isotopes in study (COHN and GREENBERG) 1938, 123, 185
 Muscle, frog, dinitrophenol effect (RONZONI and EHRENFEST) 1936, 115, 749
 Nitrogen, abscess, anemic and non-anemic dogs, protein relation (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1937, 121, 45
 —, liver function, hemoglobin production, liver injury by chloroform, anemia, relation (DAFT, ROBSCHUIT-ROBBINS, and WHIPPLE) 1936, 113, 391
 —, non-protein, hepatectomy effect (TRIMBLE and MADDOCK) 1938, 123, cxiii
 —, suprarenalectomized rats (SANDBERG and PERLA) 1936, 113, 35
 —, thyroxine and thyrotropic hormone, effect (GAEBLER and BARTLETT) 1938, 123, xl
 —, tissue, isolated (BORSOOK and JEFFREYS) 1935, 110, 495
 Phospholipids (SINCLAIR) 1935, 111, 261, 275
 —, radioactive phosphorus as indicator (PERLMAN, RUBEN, and CHAIKOFF) 1937-38, 122, 169

Metabolism—continued:

- (FRIES, RUBEN, PERLMAN, and CHAIKOFF) 1938, 123, 587
- (ENTENMAN, RUBEN, PERLMAN, LORENZ, and CHAIKOFF) 1938, 124, 795
- Phospholipids, stomach and intestine, rôle, ingested fat effect (FRIES, RUBEN, PERLMAN, and CHAIKOFF) 1938, 123, 587
- , tumors (HAVEN) 1936, 114, xlvii
1938, 118, 111
- Phosphorus, invertebrate nerve (ENGEL and GERARD) 1935-36, 112, 379
- Poliomyelitis (MAGERS) 1934, 105, lvi
- Protein (HOWLAND and HAWKINS) 1938, 123, 99
- , anterior pituitary growth hormone, effect (SCHAFFER and LEE) 1935, 108, 355
(GAEBLER and PRICE) 1937, 121, 497
- , glycine synthesis, influence (GRIFFITH) 1934, 105, xxxiii
- Purine, epinephrine influence (CHAIKOFF, LARSON, and READ) 1935, 109, 395
- , insulin and adrenal medulla, relation (LARSON and BREWER) 1936, 115, 279
- , — effect, Dalmatian coach-dog (CHAIKOFF and LARSON) 1935, 109, 85
- Pyrimidines, growth (SILVER and CERECEDO) 1936, 114, xciii

Metabolism—continued:

- Sterols (ECKSTEIN) 1938, 125, 99, 107
- , plants (MACLACHLAN) 1936, 113, 197
1936, 114, 185
- Sulfur (CHASE and LEWIS) 1933, 101, 735
(VIRTUE and LEWIS) 1934, 104, 59
(LEWIS and FRAYSER) 1935, 110, 23
(LEWIS, BROWN, and WHITE) 1936, 114, 171
(WHITE, LEWIS, and WHITE) 1937, 117, 663
(HEARD and LEWIS) 1938, 123, 203
- , anterior pituitary growth preparation, effect (GAEBLER and PRICE) 1936, 114, xxxix
- , cat (VIRTUE) 1936, 114, cvi
- , dog and pig, comparison (STEKOL) 1936, 113, 675
- , suprarenalectomized rats (SANDBERG and PERLA) 1936, 113, 35
- Tissue, lactoflavin and vitamin B₆ deficiency, effect (MUUS, BESSEY, and HASTINGS) 1937, 119, lxxii
- Trihalophenol effect, mechanism (CLOWES and KRAHL) 1936, 114, xix
- Metabolites: Oxidation (WITZEMANN) 1934, 107, 475
- Metal(s): Catalysts, oxidations, biological, tissue inhibitors and, effect (KHARASCH, LEGAULT, WILDER, and GERARD) 1936, 113, 557

Metal(s)—continued:

- Divalent, jack bean hemagglutinin inactivation, reversible, relation (SUMNER and HOWELL) 1936, 115, 583
- Thioglycolic acid oxidation, buffer, dithiol and, effect (KHARASCH, LEGAULT, WILDER, and GERARD) 1936, 113, 537

Metal compounds: Papain activity, influence (HELLERMAN and PERKINS)

1934, 107, 241

- Pneumococcal hemolysin inactivation, effect (SHWACHMAN, HELLERMAN, and COHEN) 1934, 107, 257

Metal derivatives: Insulin inactivation effect (SCHOCK, JENSEN, and HELLERMAN)

1935, 111, 553

Metal ions: Arginase activation, rôle (HELLERMAN and PERKINS)

1935-36, 112, 175

- Arginine hydrolysis, urease and, effect (HELLERMAN and PERKINS)

1935-36, 112, 175

- Liver arginase activation, rôle (HELLERMAN and STOCK)

1938, 125, 771

Metamorphosis: Bee-moth, reducing substances, effect (CRESCITELLI and TAYLOR)

1935, 108, 349

Metaphosphoric acid: Ascorbic acid oxidation, catalytic effect (LYMAN, SCHULTZE, and KING)

1937, 118, 757

- Vitamin C extraction and titration, reagent (MUSULIN and KING) 1936, 116, 409

Methanes: Disubstituted, symmetrical, from optically active homologous series of disubstituted carboxylic acids and derivatives (LEVENE and MARKER)

1934, 106, 173

- Methyloctylphenethyl-, optical rotation (LEVENE and HARRIS) 1935, 111, 735

Methanol: Detection and determination (HARGER, JOHN-SON, and BRIDWELL)

1938, 123, p. 1

Methemoglobin: Blood cell, red, oxidation, methylene blue and, effect (WENDEL)

1933, 102, 385

- Determination, photoelectric colorimeter (EVELYN and MALLOY)

1938, 123, xxxiv

Formation, tissues (BERNHEIM and MICHEL)

1937, 118, 743

- Hemoglobin, reduction, methylene blue (WENDEL)

1938, 123, cxxiv

- solutions, determination, spectrophotometric (MICHEL)

1937, 119, lxix

Spectrophotometry (DRABKIN and AUSTIN)

1934, 105, xxiii

- (AUSTIN and DRABKIN)

1935-36, 112, 67

***Streptococcus viridans*, formation** (FISHBERG and BAUM)

1938, 123, xxxv

Methiol- α -hydroxybutyric acid: *dl*- γ -, metabolism, cystinuria (BLOCK, BRAND, and CAHILL)

1937, 119, xii

Methionine: Arachin, nutritive limiting factor (BEACH and WHITE) 1937, 119, viii
 Blood plasma cystine, administration effect (LEWIS and BROWN) 1938, 123, lxxv
 Cystine excretion, cystinuria, ingestion effect (LEWIS, BROWN, and WHITE) 1936, 114, 171
 Cystinuria, administration effect (ANDREWS, ANDREWS, and RUTENBER) 1938, 123, iii (HESS and SULLIVAN) 1938, 123, lv
d-, and formyl derivatives, growth effect (JACKSON and BLOCK) 1937-38, 122, 425
 Deficiency, cholic acid administration relation (WHITE) 1935-36, 112, 503
 -Deficient diet, cystamine, inadequate cystine, growth relation (JACKSON and BLOCK) 1936, 113, 135
 Dideutero-, synthesis (PATTERSON and DU VIGNEAUD) 1938, 123, 327
 Dietary, hair effect (HEARD and LEWIS) 1938, 123, 203
dl-, absorption rate, gastrointestinal tract (CHASE and LEWIS) 1933, 101, 735
 —, *l*-cystine and, metabolism, comparison (VIRTUE and LEWIS) 1934, 104, 59
 —, mercapturic acid synthesis, relation (STEKOL) 1937-38, 122, 333

Methionine—continued:

dl-, metabolism, dietary protein, effect (STEKOL) 1935, 109, 147
 Growth relation (WOMACK, KEMMERER, and ROSE) 1937, 121, 403 (HEARD and LEWIS) 1938, 123, 203
 Hexo-, synthesis and physiological availability (JONES and DU VIGNEAUD) 1937, 120, 11
 Homo-, availability (DYER and DU VIGNEAUD) 1935, 108, 73
 —, synthesis (DU VIGNEAUD, DYER, JONES, and PATTERSON) 1934, 106, 401
 Hydroxy analogue, metabolism, cystinuria (BRAND, BLOCK, and CAHILL) 1937, 119, 681
l-, and formyl derivatives, growth effect (JACKSON and BLOCK) 1937-38, 122, 425
 —, metabolism, dietary protein, effect (STEKOL) 1935, 109, 147
 Liver fat, effect (TUCKER and ECKSTEIN) 1937, 121, 479
 Metabolism (JACKSON and BLOCK) 1937-38, 122, 425
 —, cystinuria (BRAND, CAHILL, and HARRIS) 1935, 109, 69
 N-Methyl-, synthesis and growth effect, cystine-deficient diet (PATTERSON, DYER, and DU VIGNEAUD) 1936, 116, 277

Methionine—*continued*:

Methylthiol group, physiological specificity (DYER)

1938, 124, 519

Naturally occurring, homocystine isomers, optically active, configurational relationship (DU VIGNEAUD and PATTERSON)

1935, 109, 97

Nutrition rôle (WHITE and BEACH) 1937-38, 122, 219

Proteins, determination (BAERNSTEIN)

1934, 106, 451

1936, 114, v

1936, 115, 25, 33

(KASSELL) 1937, 119, lvi

(KASSELL and BRAND)

1938, 125, 145

Sulfur determination, Benedict-Denis method (RUTENBER and ANDREWS)

1937, 120, 203

—, oxidation, body (DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481

Utilization, growth, bromobenzene effect (WHITE and JACKSON) 1935, 111, 507

Methoxybutyric nitrile: β -, methoxypropionic nitrile, configurational relationship (LEVENE and MARKER)

1933, 102, 297

Methoxylase: Pectin-, activity, determination (KERTESZ)

1937, 121, 589

Methoxypropionic nitrile: β -Methoxybutyric nitrile, configurational relationship (LEVENE and MARKER)

1933, 102, 297

Methyl alcohol:

See also Methanol

Methylbenzylacetic acid: Derivatives, methylphenethylacetic acid derivatives, configurational relationship (LEVENE)

1935, 110, 323

Methylbenzylpropionic acid, configurational relationship (LEVENE and MARKER)

1935, 110, 299

Methylbenzylpropionic acid: Methylbenzylacetic acid, configurational relationship (LEVENE and MARKER)

1935, 110, 299

Methylcholanthrene: Isomers, carcinogenesis effect (SHEAR)

1936, 114, lxxxix

Methylcyclohexylcarbinol:

Methylhexylcarbinol, configurational relationship (LEVENE and HARRIS)

1936, 113, 55

Methylcysteine: N-, and derivatives (BLOCH and CLARKE)

1938, 125, 275

S-, metabolism, cystinuria (BRAND, BLOCK, and CAHILL) 1937, 119, 689

—, sulfur, oxidation, body (DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481

Methylene blue: Blood cell, red, oxidation, cyanide effect (WENDEL)

1933, 102, 385

— — — —, methemoglobin effect (WENDEL)

1933, 102, 385

Lactate-pyruvate oxidation, erythrocytes and, effect (WENDEL) 1933, 102, 373

Methylene blue—*continued*:

Methemoglobin reduction to hemoglobin (WENDEL)

1938, 123, cxxiv

Potassium determination, volumetric, with (BOLLIGER)

1934, 107, 229

Methyl-*d*-galacturonide: α -

and derivatives, ring structure (LEVENE and KREIDER)

1937, 120, 597

—, hydrolysis, kinetics (MORELL and LINK)

1934, 104, 183

β -, α -acetobromo-*d*-galacturonic acid methyl ester, conversion from (MORELL, BAUR, and LINK)

1935, 110, 719

Methylglycoside(s): Hexuronic acids, naturally occurring (MORELL and LINK)

1934, 104, 183

Polygalacturonic acid-, Ehrlich's *Pektolsäure* and *Pektolactonsäure* (BAUR and LINK)

1935, 109, 293

— —, pectin (MORELL, BAUR, and LINK)

1934, 105, 1

Methylglyoxal: Thiol acids, combination (SCHUBERT)

1935, 111, 671

Methylheptylacetic acid: Derivatives,

methyloctylacetic acid derivatives, configurational relationship (LEVENE)

1935, 110, 323

Methylhexylacetic acid: Methyl-

phenylacetic acid, configurational relationship (LEVENE and HARRIS)

1935-36, 112, 195

Methylhexylcarbinol: Methyl-

cyclohexylcarbinol, configurational relationship

(LEVENE and HARRIS)

1936, 113, 55

Methylhistidine: *l*-1-, anserine

synthesis from (BEHRENS and DU VIGNEAUD)

1937, 120, 517

Methylhomocystine: Di-N-, syn-

thesis and growth effect, cystine-deficient diet (PATTERSON, DYER, and DU VIGNEAUD)

1936, 116, 277

Methyl hypobromite: Unsaturated

acids, effect (WEST, KRUMMEL, and CARTER)

1937-38, 122, 605

Methylmethionine: N-, synthesis

and growth effect, cystine-deficient diet (PATTERSON, DYER, and DU VIGNEAUD)

1936, 116, 277

Methyl monoacetone xylose: 5-,

phosphoric esters, pentose, yeast nucleic acid, relation (LEVENE and RAYMOND)

1933, 102, 347

Methyloctylacetic acid: Derivatives,

methylheptylacetic acid derivatives, configurational relationship (LEVENE)

1935, 110, 323

Methyloctylphenethylmethane:

Optical rotation (LEVENE and HARRIS)

1935, 111, 735

Methylose: *d*-Allo-, synthesis,

5-tosyl monoacetone *l*-rhamnose hydrolysis, relation (LEVENE and COMPTON)

1936, 116, 169

Methylose—*continued*:

d-Gulo-, crystalline, and derivatives (LEVENE and COMPTON) 1935, 111, 335

d-Xylo-, and derivatives (LEVENE and COMPTON) 1935, 111, 325

—, chemical constitution (LEVENE and COMPTON) 1935-36, 112, 775

Methylside: Theophylline-*d*-allo-, synthesis (LEVENE and COMPTON) 1937, 117, 37

Methyl- β -oxyphenazine: N-, oxidation-reduction potentials (PREISLER and HEMPELMAN) 1936, 114, lxxxi

Methylphenethylacetic acid: Derivatives, methylbenzylacetic acid derivatives, configurational relationship (LEVENE) 1935, 110, 323

Methylphenylacetic acid: Hydrocarbons derived from (LEVENE and MARKER) 1935, 108, 409

Methylhexylacetic acid, configurational relationship (LEVENE and HARRIS) 1935-36, 112, 195

Methylthiol group: Methionine, physiological specificity (DYER) 1938, 124, 519

Methyl uridine: N-, uridine chemical constitution, relation (LEVENE and TIPSON) 1934, 104, 385

Methyl xylose: 3- and 5- (LEVENE and RAYMOND) 1933, 102, 331

Mice: Homozygous, test animals (McCLENDON and STREET) 1935, 109, lxi

Microorganism(s): Carotene synthesis (BAUMANN, STEENBOCK, INGRAHAM, and FRED) 1933, 103, 339

Intestine, sulfur compounds reduced to hydrogen sulfide by (ANDREWS) 1937-38, 122, 687

Vitamin A synthesis (BAUMANN, STEENBOCK, INGRAHAM, and FRED) 1933, 103, 339

Milk: (*See note on p. 221*)

Anemia from, cobalt, iron and copper with, effect (UNDERWOOD and ELVEHJEM) 1938, 124, 419

— —, therapy (FITZ-HUGH, ROBSON, and DRABKIN) 1933, 103, 617

Buffer intensity (WHITTIER) 1933, 102, 733
1938, 123, 283

-Clotting, papain action (BALLS and HOOVER) 1937, 121, 737

Cod liver oil, shark liver oil, and salmon oil, effect (McCAY and MAYNARD) 1935, 109, 29

Constituents, antirachitic activation (ANSBACHER and SUPPLEE) 1934, 105, 391

—, vitamin D and, relation (SUPPLEE, ANSBACHER, BENDER, and FLANIGAN) 1936, 114, 95

Copper-low, anemia, hemoglobin production and iron and copper metabolism

Milk—continued:

- (BING, SAURWEIN, and MYERS) 1934, 105, 343
 -Curdling enzymes, inhibitors (TAUBER) 1934, 107, 161
 Diet effect (MUELLER and COX) 1937, 119, lxxii
 Elaidic acid relation (McCONNELL and SINCLAIR) 1937, 118, 123
 Fat, blood precursor (MAYNARD, HODSON, ELLIS, and McCAY) 1937, 119, lxvi
 —, diet lipids, effect (MUELLER and COX) 1938, 123, lxxxviii
 Fluorine ingestion effect (PHILLIPS, HART, and BOHSTEDT) 1934, 105, 123
 Goat, fat, fatty acids (RIEMENSCHNEIDER and ELLIS) 1936, 113, 219
 —, fatty acids, distribution, cottonseed meal ingestion effect (RIEMENSCHNEIDER and ELLIS) 1936, 114, 441
 Human (ERICKSON, STONER, and MACY) 1933, 103, 235
 —, non-protein nitrogen constituents (ERICKSON, GULICK, HUNSCHER, and MACY) 1934, 106, 145
 Hydrogen sulfide-treated, copper deficiency development (SUMMERSON) 1938, 123, cxix
 Lactogenic hormone stimulation, effect (BERGMAN and TURNER) 1937, 120, 21

Milk—continued:

- Lipids (KURTZ, JAMIESON, and HOLM) 1934, 106, 717
 Rat (COX and MUELLER) 1936, 114, xxii
 Tetany production, relation (DUNCAN, HUFFMAN, and ROBINSON) 1935, 108, 35
Milking: Apparatus, small laboratory animals (COX and MUELLER) 1936, 114, xxii
Mineral(s): Acid-base balance, pregnancy (COONS, COONS, and SCHIEFELBUSCH) 1934, 104, 757
 Analysis, apparatus, evaporation, concentrated salt solutions (GUEST and LEVA) 1935, 110, 777
 Balance, alkaline and saline waters, effect (HELLER and HADDAD) 1936, 113, 439
 Blood, distribution, anemia, children (ERICKSON, COPE, STERNBERGER, LEE, COOLEY, and MACY) 1935, 109, xxx
 (ERICKSON, WILLIAMS, HUMMEL, LEE, and MACY) 1937, 118, 569
 —, —, —, pernicious (WILLIAMS, ERICKSON, BERNSTEIN, HUMMEL, and MACY) 1937, 118, 599
 —, —, children (ERICKSON, WILLIAMS, HUMMEL, and MACY) 1937, 118, 15
 Metabolism, adolescent girls (WANG, KAUCHER, and WING) 1935, 109, xcvi

Mineral(s)—*continued*:

Metabolism, magnesium deprivation, effect (KRUSE, SCHMIDT, and McCOLLUM)

1934, 106, 553

—, muscle dystrophy, pseudo-hypertrophic, boys (WANG, KAUCHER, and WING)

1935, 109, xcv

—, nephrosis, children (WANG, KAUCHER, and WING)

1935, 109, xcv

—, radioactive isotopes in study (COHN and GREENBERG)

1938, 123, 185

Muscles, dystrophy-producing diet (MORGULIS and OSHEROFF)

1938, 124, 767

Partition, intestinal digestion (SCHAIBLE, BANDEMER, and MOORE)

1935, 109, lxxix

Mineral constituents: Blood, inorganic salt intake, effect (HELLER and PAUL)

1934, 105, 655

Mitochondria: Lipids, total, dibenzanthracene effect (GOERNER)

1937-38, 122, 529

Tumor, vitamin A and (GOERNER and GOERNER)

1938, 123, 57

Vitamin A, dibenzanthracene effect (GOERNER)

1937-38, 122, 529

Moisture: Residual, dry biological substances, determination (FLOSDORF and WEBSTER)

1937, 121, 353

Mold(s): Enzymes, proteolytic (BERGER, JOHNSON, and PETERSON)

1937, 117, 429

Mold(s)—*continued*:

Tissue, chemistry (WOOLLEY and PETERSON)

1936, 114, 85

1937, 118, 363

1937, 121, 507

1937-38, 122, 213

See also Fungus

Molecular rotation: Homologous series (LEVENE and MARKER)

1933, 103, 299

Molecular solids: Macro-, long spacings (COREY and WYCKOFF)

1936, 114, 407

Molecules: Uncharged, systems containing, activity coefficients and reaction rate (STRAUP-COPE and COHN)

1934, 105, lxxxvii

Mollusk(s): Sterols (BERGMANN)

1934, 104, 317

Stigmasterol (BERGMANN)

1937, 118, 499

Monkey: Blood plasma and blood cells, red, electrolytes, relation (YANNET, DARROW, and CARY)

1935-36, 112, 477

Ketosis, fasting (FRIEDEMANN)

1934, 105, 335

Leucopenia and anemia, diet relation (DAY, LANGSTON, and SHUKERS)

1936, 114, xxv

Monoacetone adenosine: Phosphorylation (LEVENE and TIPSON)

1937, 121, 131

Monoacetone *l*-arabofuranoside: Preparation (LEVENE and COMPTON)

1936, 116, 189

Monoacetone *d*-xyloketose: (LEVENE and TIPSON)

1934, 106, 603

- Monoacetone xylose:** Derivatives (LEVENE and RAYMOND) 1933, 102, 317
- Monoacetone d-xylulose:** Structure (LEVENE and TIPSON) 1937, 120, 607
- Monoaminodicarboxy acids:** *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1937, 121, 507
- Monoaminomonocarboxy acids:** *Aspergillus sydowi*, isolation (WOOLLEY and PETERSON) 1937, 121, 507
- Monobromobenzene:** Detoxication (HALEY and SAMUELSEN) 1937, 119, 383
- Monocyte:** Proteinase and peptidase activity, pleural exudates (WEISS, KAPLAN, and LARSON) 1938, 125, 247
- Monoethyl hydrogen peroxide:** Decomposition, catalase (STERN) 1936, 114, 473
- Monoheterocyclic ring compounds:** 5-Membered, antimony trichloride reaction (LEVINE and RICHMAN) 1933, 101, 373
- Monohydric substrates:** Tyrosinase action (GRAUBARD and NELSON) 1935, 111, 757
- Monohydroxypalmitic acid:** Butter fat (BOSWORTH and HELZ) 1935-36, 112, 489
- Monomethyllysine:** α -N-, growth availability (GORDON) 1937, 119, xxxvii
- Monomethyltryptophanes:** Metabolism (GORDON and JACKSON) 1935, 110, 151
- Monotrityl uridine:** Chemical constitution (LEVENE and TIPSON) 1934, 105, 419
- Morphine:** Urine, determination (OBERST) 1938, 123, lxxxix
- Mosaic:** *Aucuba virus* protein, ultracentrifugal analysis (WYCKOFF) 1938, 124, 585
- —, tobacco mosaic protein, crystalline, relation (STANLEY) 1937, 117, 325
- Tobacco protein,** x-ray diffraction patterns (WYCKOFF and COREY) 1936, 116, 51
- virus, plants diseased with, virus proteins, crystalline, ultracentrifugal analysis (WYCKOFF, BISCOE, and STANLEY) 1937, 117, 57
- — protein, activity and yield (STANLEY) 1937, 121, 205
- — —, —, determination (LORING) 1937, 121, 637
- — —, —, factors influencing (STANLEY) 1937, 117, 755
- — —, crystalline, absorption spectrum, ultraviolet (LAVIN and STANLEY) 1937, 118, 269
- — —, —, isolation from tomato plants (LORING and STANLEY) 1937, 117, 733
- — —, —, preparation (STANLEY) 1936, 115, 673
- — —, hydrogen ion concentration stability (WYCKOFF) 1937-38, 122, 239

Mosaic—continued:

- Tobacco virus protein, molecular sedimentation constants (WYCKOFF) 1937, 121, 219
 — — —, nucleic acid (LORING) 1938, 123, lxxvi
 Virus protein, latent, isolation (LORING and WYCKOFF) 1937, 121, 225
Mouth: Sore, nephritis, cause (BLISS) 1937, 121, 425
Mucic acid: Allo-, *dl*-alluronic acid synthesis from (NIEMANN, KARJALA, and LINK) 1934, 104, 189
Mucilage: Flaxseed, aldobionic acid (NIEMANN and LINK) 1934, 104, 205
 Psyllium seed (ANDERSON and FIREMAN) 1935, 109, 437
 Slippery elm bark (ANDERSON) 1934, 104, 163
Mucin: Dyes, staining (KELLEY and MILLER) 1935, 110, 119
 Gastric, mucoitin disulfuric acid from (MEYER and SMYTH) 1938, 123, lxxxiv
 Thionine staining (KELLEY and MILLER) 1935, 110, 119
Mucoid(s): Sugar radicals (MEYER and PALMER) 1935, 109, lxv
Mucoitin disulfuric acid: Gastric mucin, isolation (MEYER and SMYTH) 1938, 123, lxxxiv
Mucoitin polysulfuric acid: Heparin relations (JORPES and BERGSTRÖM) 1937, 118, 447

- Mucoitinsulfuric acid:** Gastric juice, isolation (KOMAROV) 1935, 109, 177
Mucus: Gastric juice, acidity, relation (HELMER, FOUTS, and ZERFAS) 1934, 105, xxxvii
Muscle: Activity, phospholipid, relation (BLOOR and SNIDER) 1934, 107, 459
 Adenylic acid, acridine salts (TIPSON) 1937, 120, 621
 Annelid (KURTZ and LUCK) 1935, 111, 577
 Beef, hemoglobin regeneration influence (ROSE, VAHLTEICH, and MACLEOD) 1934, 104, 217
 Blood volume determination (EICHELBERGER) 1937-38, 122, 323
 Cholesterol (BLOOR and SNIDER) 1935, 109, ix
 (BLOOR) 1936, 114, 639
 —, activity effect (BLOOR) 1937, 119, 451
 Choline esterase activity, prostigmine effect (STADIE and JONES) 1938, 123, cxiv
 Collagen, normal and dystrophic (SPENCER, MORGULIS, and WILDER) 1937, 120, 257
 Contraction, cytochromes, oscillographic study (URBAN and PEUGNET) 1937, 119, c
 Creatine (CORLEY, KRAMER, and WOLF) 1935, 109, xxiii
 — and potassium, relation (MYERS and MANGUN) 1936, 114, lxxv

Muscle—*continued*:

- Creatine, phosphorus and potassium relation (MANGUN and MYERS) 1938, 123, lxxix
- , thyroid and thyroxine effect (BODANSKY) 1935, 109, 615
- Dystrophies (SULLIVAN) 1936, 114, ciii
- , urine guanidine derivatives (SULLIVAN, HESS, and IRREVERRE) 1936, 114, 633
- Dystrophy (MORGULIS and SPENCER) 1936, 114, lxxii
- , cholesterol (WILDER) 1937, 119, civ
- , electrolytes (FENN and GOETTSCH) 1937, 120, 41
- , guanidine and derivatives, relation (SULLIVAN) 1935, 109, lxxxix
- , lipids (MORGULIS, WILDER, SPENCER, and EPPSTEIN) 1938, 124, 755
- , muscle minerals (MORGULIS and OSHEROFF) 1938, 124, 767
- , progressive, glycolic acid metabolism (MILHORAT and TOSCANI) 1936, 114, 461
- , —, urine (SULLIVAN and HESS) 1934, 105, lxxxix
- , pseudohypertrophic, glycine synthesis (FREIBERG and WEST) 1933, 101, 449
- , —, mineral metabolism, boys (WANG, KAUCHER, and WING) 1935, 109, xcv

Muscle—*continued*:

- Electrolytes, blood and, distribution, adrenalectomy effect (HEGNAUER and ROBINSON) 1936, 116, 769
- Esterification (CORI and CORI) 1936, 116, 129
- Extract, glycogen hydrolysis (CARRUTHERS) 1935, 108, 535
- Ferrocyanide, microdetermination (EDWARDS and LANGLEY) 1935-36, 112, 469
- Frog, anaerobic, carbohydrate, hydrogen ion concentration effect (KERLY and RONZONI) 1933, 103, 161
- , epinephrine influence (HEGNAUER and CORI) 1934, 105, 691
- , hexosemonophosphate (CORI and CORI) 1934, 105, xvii
- , hexosephosphate disappearance (RONZONI and KERLY) 1933, 103, 175
- , — esters, formation (CORI and CORI) 1936, 116, 119
- , metabolism, dinitrophenol effect (RONZONI and EHRENFEST) 1936, 115, 749
- Gastric ulcer-producing substance, isolation (TASHIRO) 1937, 119, xcviii
- Glycerol extract, glycogen hydrolysis (CARRUTHERS and LEE) 1935, 108, 525
- Glycogen and fat content, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER) 1934, 104, 519
- determination (GUEST) 1938, 123, xlviii

Muscle—continued:

- Glycogen, fasting effect (BLATHERWICK, BRADSHAW, and SAWYER) 1936, 114, xii
 —, low oxygen pressure, effect (EVANS) 1934, 105, xxvi
 —, resynthesis, hexosemonophosphate (CORI, CORI, and HEGNAUER) 1937, 120, 193
 Heart, electrolytes, disease effect (CULLEN, WILKINS, and HARRISON) 1933, 102, 415
 —, sugar, fermentable (CORI, CLOSS, and CORI) 1933, 103, 13
 Hemoglobin, beef, spectrophotometric characteristics (SHENK, HALL, and KING) 1934, 105, 741
 Hexosemonophosphate disappearance (CORI and CORI) 1934, 107, 5
 Inosinic acid (LEVENE and TIPSON) 1935, 111, 313
Limulus polyphemus, organic phosphates, distribution (ENGEL and CHAO) 1935, 108, 389
 Lipids, function, relation (BLOOR and SNIDER) 1934, 105, x
 Mammalian, carnosine and anserine determination (ZAPP) 1938, 123, cxxxii
 Minerals, dystrophy-producing diet (MORGULIS and OSHEROFF) 1938, 124, 767
Necturus, nitrogenous extractives (WILSON and WOLFF) 1938, 124, 103
 Oxidase, milk and, synergistic

Muscle—continued:

- action (MACHT and BRYAN) 1935, 110, 101
 Pecten, basic extractives (MOORE and WILSON) 1934, 105, lxiii
 —, nitrogenous extractives (MOORE and WILSON) 1936, 114, lxxi
 Phospholipid, activity effect (BLOOR and SNIDER) 1934, 107, 459
 (BLOOR) 1937, 119, 451
 — fatty acids (SNIDER) 1936, 116, 503
 Phosphorus, potassium, and creatine relation (MANGUS and MYERS) 1938, 123, lxxix
 Potassium and creatine, relation (MYERS and MANGUN) 1936, 114, lxxv
 Salt and water, blood and, exchange (HASTINGS and EICHELBERGER) 1935, 109, xli
 — — —, — and, exchange, body water effect (HASTINGS and EICHELBERGER) 1937, 117, 73
 — — —, — and, exchange, dehydration effect (EICHELBERGER and HASTINGS) 1937, 118, 205
 — — —, — and, exchange, hydronephrosis effect (EICHELBERGER) 1937, 119, xxx
 — — —, — and, exchange, respiratory alkalosis and acidosis, effect (EICHELBERGER and HASTINGS) 1937, 118, 197

Muscle—*continued*:

- Scallop, nitrogenous extrac-
tives (MOORE and WILSON)
1937, 119, 585
- , octopine (MOORE and
WILSON) 1937, 119, 573
- Skeletal, carnosine and an-
serine (WOLFF and WILSON)
1935, 109, 565
- , sugar, fermentable (CORI,
CLOSS, and CORI)
1933, 103, 13
- Smooth, proteins (MEHL)
1938, 123, lxxxiii
- Water and electrolytes, growth
effect (YANNET and DAR-
ROW) 1938, 123, 295
- , blood and, distribution
adrenalectomy effect (HEG-
NAUER and ROBINSON)
1936, 116, 769
- See also* Exercise, Myasthenia
gravis, Work
- Mussel**: Catalase, oxygen, inac-
tivation (MARKS and FOX)
1933, 103, 269
- Myasthenia gravis**: Liver argi-
nase (MILHORAT)
1935, 111, 379
- Prostigmine effect (STADIE and
JONES) 1938, 123, cxiv
- Myelin sheath**: Degenerative
changes, diagnosis by polar-
izing microscope (SUTTON,
SETTERFIELD, and KRAUSS)
1934, 105, lxxxix
- Myoglobin**: Solubility, ammo-
nium sulfate solutions (MOR-
GAN) 1935-36, 112, 557
- Myxedema**: Artificial protein
remedy, thyroid diiodoty-
rosine peptone derivative

(SALTER and PEARSON)
1935-36, 112, 579

N

- Nail(s)**: Cystine, cystinuria
(LEWIS and FRAYSER)
1935, 110, 23
- Finger, amino acids, basic
(BLOCK) 1934, 104, 339
- , —, normal and arthritic
(HESS) 1935, 109, xliii
- , cystine determination (SUL-
LIVAN, HOWARD, and HESS)
1937, 119, 721
- Isoelectric point (WILKERSON)
1935-36, 112, 329
- Naphthalene**: Absorption and de-
toxication, bile rôle (STEKOL
and MANN)
1937, 117, 619
- Dietary, glutathione, growth
effect (STEKOL)
1938, 123, cxvi
- , growth effect (STEKOL)
1937, 121, 87
- Metabolism, adult and growing
dogs (STEKOL)
1935, 110, 463
- Naphthylamine**: β -, metabolism
(WILEY)
1938, 123, cxxvii
1938, 124, 627
- Narcotics**: Brain carbohydrate
and phosphocreatine, effect
(KERR and ANTAKI)
1937-38, 122, 49
- Navy bean**: *See* Bean
- Necturus**: Inulin excretion, glo-
merulus (HENDRIX, WEST-
FALL, and RICHARDS)
1936, 116, 735

Necturus—*continued*:

Muscle, nitrogenous extrac-
tives (WILSON and WOLFF)

1938, 124, 103

Urine, glomerulus, chloride
(WESTFALL, FINDLEY, and
RICHARDS)

1934, 107, 661

—, —, hydrogen ion concen-
tration determination, mi-
croquinhydrone electrode
(PIERCE and MONTGOMERY)

1935, 110, 763

—, —, inorganic phosphate
(WALKER)

1933, 101, 239

—, —, reaction (MONT-
GOMERY)

1935, 110, 749

—, —, reducing substances
(WALKER and REISINGER)

1933, 101, 223

Nembutal: Basal metabolism
effect (CAVETT)

1937, 119, xvii

Nephrectomy: Blood plasma cho-
lesterol, effect (LUDEWIG)

1938, 123, lxxviii

— — phospholipid phos-
phorus, effect (LUDEWIG)

1938, 123, lxxviii

— — proteins, effect (CHA-
NUTIN and LUDEWIG)

1937, 119, xviii

— serum calcium, calciferol
effect (TWEEDY, McNA-
MARA, TEMPLETON, and
PATRAS)

1937, 119, xcix

Body water, effect (CHANUTIN)

1938, 123, xx

Kidney function, effect (CHA-
NUTIN and LUDEWIG)

1935, 109, xviii

Nephrectomy—*continued*:

Liver total fatty acid and cho-
lesterol, yeast-containing

diets, effect (HORTENSTINE,
CHANUTIN, and LUDEWIG)

1938, 125, 455

Nephritis: Ammonia secretion,
urine acid-base balance, re-
lation (BRIGGS)

1935, 109, xii

Blood creatinine, determina-
tion, enzymatic (MILLER
and DUBOS)

1937, 121, 457

Sore mouth in, cause (BLISS)

1937, 121, 425

Uranium, blood guanidine-like
substance (WEBER)

1938, 123, cxxiv

Urine creatinine, determina-
tion, enzymatic (MILLER
and DUBOS)

1937, 121, 457

Xylose tolerance, blood urea,
comparison (LARSON)

1935, 109, lii

Nephrosis: Mineral metabolism,
children (WANG, KAUCHER,
and WING)

1935, 109, xc v

Nerve: Degeneration, avitamins-
is A, relation (SUTTON, SET-
TERFIELD, and KRAUSS)

1934, 105, lxxxix

Impulses, choline esterase rela-
tion (GLICK)

1938, 123, xlii

Invertebrate, phosphorus me-
tabolism (ENGEL and GE-
RARD)

1935-36, 112, 379

Lipids, arteriosclerosis and dia-
betes, effect (RANDALL)

1938, 125, 723

- Nerve tissue:** Glycogen determination (KERR) 1936, 116, 1
- Neurofibrils:** Protein, amino acids (BLOCK) 1937, 119, xi
- Neuroproteins:** Amino acids (BLOCK) 1937, 119, xi, 765
1937, 120, 467
1937, 121, 411, 761
1938, 123, xiii
- New-born:** Thyroid thyroxine, microdetermination (PALMER, LELAND, and GUTMAN) 1938, 125, 615
- Weight, pituitary, anterior, extract, growth hormone, effect (WATTS) 1935, 109, xcv
- Nicotinamide:** Urine, determination (VILTER, SPIES, and MATHEWS) 1938, 125, 85
- Nicotinic acid:** Chick dermatitis, inactivity (MICKELSEN, WAISMAN, and ELVEHJEM) 1938, 124, 313
- Diphtheria bacillus growth accessory (MUELLER) 1937, 120, 219
- Urine, determination (VILTER, SPIES, and MATHEWS) 1938, 125, 85
- Nitrate:** Assimilation (BAUDISCH) 1934, 105, vii
- Nitric oxide hemoglobin:** Spectrophotometry (DRABKIN and AUSTIN) 1935-36, 112, 51
- Nitrile(s):** Aliphatic, homologous series, optical rotations and rotatory dispersions (LEVENE, ROTHEN, and MARKER) 1936, 115, 253
- Nitrile(s)—continued:**
Methoxypropionic and β -methoxybutyric, configurational relationship (LEVENE and MARKER) 1933, 102, 297
- Nitrite:** Assimilation (BAUDISCH) 1934, 105, vii
- Nitrogen:** Abscess, metabolism, anemic and non-anemic dogs, protein relation (DAFT, ROBSCHT-ROBBINS, and WHIPPLE) 1937, 121, 45
- Amide. *See* Amide nitrogen
- Amino. *See* Amino nitrogen
- acid, blood, determination (DANIELSON) 1933, 101, 505
- — —, insulin effect (POWERS and REIS) 1933, 101, 523
- Atmospheric, blood cells and plasma, solubility and physical state (VAN SLYKE, DILLON, and MARGARIA) 1934, 105, 571
- Creatinine, boys and girls (WANG) 1937, 119, cii
- Determination, Kjeldahl, copper selenite as catalyst (SCHWUEGLER, BABLER, and HURD) 1936, 113, 749
- — — modification (CAMPBELL and HANNA) 1937, 119, 1
- Distribution, thyroglobulin, normal and goitrous (CAVETT) 1936, 114, 65
- Excretion, endogenous, protein biological value, relation (FRENCH and MATTILL) 1936, 114, xxxvii

Nitrogen—continued:

- Extractives, *Necturus* muscle
(WILSON and WOLFF) 1938, 124, 103
- Feces (SCHNEIDER) 1935, 109, 249
- , dietary fat and carbohydrates, effect (MITCHELL) 1934, 105, 537
- Gas, *Azotobacter*, solubility and absorption (LINEWEAVER) 1937-38, 122, 549
- Isotope, intermediary metabolism study (SCHOENHEIMER, FOSTER, RITTENBERG, and RATNER) 1938, 123, cv
- Metabolism, liver function, hemoglobin production, liver injury by chloroform, anemia, relation (DAFT, ROBSCHT-ROBBINS, and WHIPPLE) 1936, 113, 391
- , suprarenalectomized rats (SANDBERG and PERLA) 1936, 113, 35
- , temperature and thyroid function relation (BODANSKY and DUFF) 1936, 114, xiii
- , thyroxine and thyrotropic hormone effect (GAEBLER and BARTLETT) 1938, 123, xl
- , tissue, isolated (BORSOOK and JEFFREYS) 1935, 110, 495
- Microdetermination, manometric (VAN SLYKE and KUGEL) 1933, 102, 489
- Non-protein, constituents, milk, human (ERICKSON,

Nitrogen—continued:

- GULICK, HUNSCHER, and MACY) 1934, 106, 145
- Non-protein, metabolism, hepatectomy effect (TRIMBLE and MADDOCK) 1938, 123, cxiii
- , tissue, determination (MEZINCESCU and SZABO) 1936, 115, 131
- Partition, fractions, blood, mammary gland, utilization (GRAHAM, PETERSON, HOUCHIN, and TURNER) 1937-38, 122, 275
- , proteins, bacilli, acid-fast, biological activity, relation (SEIBERT and MUNDAY) 1933, 101, 763
- , tissues (AYRES and LEE) 1936, 115, 139
- , urine, primates (RHEINBERGER) 1936, 115, 343
- , —, woodchuck (CARPENTER) 1937-38, 122, 343
- Protein, protein denaturation, effect (HENDRIX and DENNIS) 1938, 123, liii
- Solubility, blood (HAWKINS and SHILLING) 1936, 113, 273
- Sugar-beet, carbon dioxide effect (FIFE and FRAMPTON) 1935, 109, 643
- Total, hemoglobin (MORRISON and HISEY) 1935, 109, 233
- , microdetermination (BORSOOK) 1935, 110, 481
- Urea, blood, insulin effect (POWERS and REIS) 1933, 101, 523
- Nitrogenous compounds:** *Aspergillus sydowi*, isolation

Nitrogenous compounds—continued:

(WOOLLEY and PETERSON)
1937, 119, cvii

Nitrogenous constituents: Milk,
determination (ERICKSON,
STONER, and MACY)
1933, 103, 235

Nitrogenous extractives: Muscle,
pecten (MOORE and WILSON)
1936, 114, lxxi
—, scallop (MOORE and WILSON)
1937, 119, 573, 585

Nitrogenous substances: Sugar
determination, effect (SHEP-
PARD and EVERETT)

1935, 109, lxxxii

Urine, precipitation, alkaline
mercuric reagents (EVERETT,
SHEPPARD, and JOHNSON)

1934, 104, 1

Nitrosyl chloride: β -Phenylpro-
pylamine, action (LEVENE
and MARKER)

1933, 103, 373

Nitrous acid: Cystine and related
sulfur-containing com-
pounds, reaction (LOUGH
and LEWIS) 1934, 104, 601

Lysine peptides, behavior
(GREENSTEIN)

1933, 101, 603

β -Phenylpropylamine, action
(LEVENE and MARKER)

1933, 103, 373

Nitrous oxide: Blood, determina-
tion (ORCUTT and WATERS)
1937, 117, 509

Nomogram: Blood acid-base
(HASTINGS and SHOCK)

1934, 104, 575

Nonacosane: *n*-, melting point

(MARKLEY and SANDO)

1933, 101, 431

Norleucine: 3-Aminoheptane,
configurational relationship
(LEVENE and KUNA)

1937-38, 122, 291

2-Aminoheptane, configura-
tional correlation (LEVENE
and MARDASHEW)

1937, 117, 707

dl-, fate (BUTTS, BLUNDEN, and
DUNN) 1937, 120, 289

Growth relation (WOMACK and
ROSE) 1936, 116, 381

Metabolism (CARTER)
1935, 108, 619

Phenyl derivatives, synthesis
(CARTER) 1935, 108, 619

Nuclease: Activity, *Bacillus sub-*
tilis (MACFADYEN)

1934, 107, 297

Nucleic acid(s): Egg, *Arbacia*
punctulata (BLANCHARD)

1935, 108, 251

Hydrolysis, acid, formic acid
source (STEVENS)

1937, 120, 751

Pneumococci, isolation
(THOMPSON and DUBOS)

1938, 125, 65

Tobacco mosaic virus protein
(LORING) 1938, 123, lxxvi

Yeast, decomposition, enzy-
matic (DUBOS and THOMP-
SON) 1938, 124, 501

—, pentose, 5-methyl mono-
acetone xylose phosphoric
esters, relation (LEVENE and
RAYMOND) 1933, 102, 347

—, —, xylose phosphoric es-
ters, relation (LEVENE and
RAYMOND)

1933, 102, 347

Nucleoprotein(s): Dyes, staining
(KELLEY and MILLER)

1935, 110, 119

Pneumococci, isolation

(THOMPSON and DUBOS)

1938, 125, 65

Streptococcus, components, serologically active, isolation

(SEVAG, LACKMAN, and SMOLENS)

1938, 124, 425

Thionine staining (KELLEY and MILLER)

1935, 110, 119

Nucleoside(s): Synthetic (LE-
VENE and COMPTON)

1936, 114, 9

1937, 117, 37

Nucleotide(s): Adenine, blood
(BUELL)

1935, 108, 273

—, —, hemoglobin relation
(BUELL)

1935-36, 112, 523

—, hemoglobin, hematocrit,
and red blood cell count,
relation (BUELL)

1935, 109, xii

Glycogen phosphorylation, ac-
tion (CORI, COLOWICK, and
CORI)

1938, 123, 381

Purine, catabolism, blood gly-
colysis relation (EILER and
ALLEN)

1938, 123, 655

Ribose, synthesis (LEVENE and
TIPSON)

1934, 106, 113

1935, 111, 313

Nucleus: Substances, staining
(KELLEY and MILLER)

1935, 110, 113

Nut: Be-still, constituents (CHEN
and CHEN)

1934, 105, 231

Nutrition: Blood serum inorganic
phosphorus, horse, effect
(PEARSON)

1934, 106, 1

Nutrition—continued:

Chick, new factors (KEENAN,
KLINE, ELVEHJEM, HART,
and HALPIN)

1933, 103, 671

Deficiency disease, vitamin B
complex, relation (HOGAN,
RICHARDSON, and JOHNSON)

1937, 119, p. 1

Disorder, egg white antitryptic
activity, relation (PARSONS)

1936, 116, 685

Pyridine derivatives in (FUNK
and FUNK)

1937, 119, xxxv

See also Diet, Feedingstuff,
Food, Malnutrition, Ration,
Undernutrition

O

Oat: Hulls, hemicellulose (AN-
DERSON and KRZNARICH)

1935, 111, 549

Straw, lignin (PHILLIPS and
Goss)

1936, 114, 557

Oatmeal: Hemoglobin regenera-
tion influence (ROSE, VAHL-
TEICH, and MACLEOD)

1934, 104, 217

Obituary: Abel, John Jacob
(CLARK)

1938, 124, preceding p. 573

Benedict, Stanley Rossiter
(SHAFFER)

1937, 117, preceding p. 429

Folin, Otto

1934, 107, preceding p. 607

Mendel, Lafayette Benedict

1935-36, 112, preceding

p. 431

Octopine: (IRVIN)

1938, 123, lxii

Scallop muscle (MOORE and
WILSON)

1937, 119, 573

- Oil(s):** Erythematous dermatitis, ingestion effect (SALMON) 1938, 123, civ
- Peel, grapefruit, wax-like constituents (MARKLEY, NELSON, and SHERMAN) 1937, 118, 433
- Vitamin A, adsorption by sodium and potassium soaps (BROCKLESBY and KUCHEL) 1938, 123, xvi
- See also* Chrysalis oil, Cod liver oil, etc.
- Oleic acid:** Iso-, hydrogenation, deposition and utilization, body (BARBOUR) 1933, 101, 63
- Oxygen absorption, ferri cyanide as catalyst (CHOW and KAMERLING) 1934, 104, 69
- Olive oil:** Carotene stability (TURNER) 1934, 105, 443
- Onium:** Compounds, physiological activity (RENSHAW and HOTCHKISS) 1933, 103, 183 (RENSHAW and ARMSTRONG) 1933, 103, 187
- Optical activity:** *See also* Walden inversion
- Orange:** Juice, vitamin C (JOSLYN, MARSH, and MORGAN) 1934, 105, 17
- Organ(s):** Protein determination, gravimetric (ADDIS, POO, LEW, and YUEN) 1936, 113, 497
- , fasting effect (ADDIS, POO, and LEW) 1936, 115, 111
- , formation rate, casein re-feeding effect (ADDIS, POO, and LEW) 1936, 116, 343

Organ(s)—continued:

- Protein, thyroidectomy, thyroxine and dinitrophenol administration effect (ADDIS, KARNOFSKY, LEW, and POO) 1938, 124, 33
- Organic acid(s):** Rhubarb (PUCHER, CLARK, and VICKERY) 1937, 117, 599
- leaves (PUCHER, CLARK, and VICKERY) 1937, 117, 605
- Tobacco leaf, metabolism during culture (PUCHER, WAKEMAN, and VICKERY) 1937, 119, 523
- Organic bases:** Flavianates, identification (LANGLEY and ALBRECHT) 1935, 108, 729
- Organic compounds:** Carbon, microdetermination, manometric (VAN SLYKE, PAGE, and KIRK) 1933, 102, 635
- Deuterium, determination (KESTON, RITTENBERG, and SCHOENHEIMER) 1937-38, 122, 227
- Salts, alkaline reserve, effect (CAPE) 1935, 109, xvii
- Organic constituents:** Diet, fluorine toxicosis, effect (PHILLIPS and HART) 1935, 109, 657
- Organic molecules:** Synthesis and destruction, body, deuterium as indicator (SCHOENHEIMER and RITTENBERG) 1936, 114, lxxxvii
- Orosins:** Avian, relationship (BLOCK) 1934, 105, 455
- Osmosis:** Blood, adjustments (EISENMAN, HALD, and PETERS) 1937, 118, 289

- Osmotic pressure:** Blood serum evaporation rate as measure (CULBERT, McCUNE, and WEECH) 1937, 119, 589
Colloid, blood serum, pregnancy (ROTSCHAEFER and BETHELL) 1936, 114, lxxxv
—, microdetermination, apparatus (DUBACH and HILL) 1935-36, 112, 313
- Ostreasterol:** Absorbability (SPERRY and BERGMANN) 1937, 119, 171
Chemistry (BERGMANN) 1934, 104, 553
- Ouabain:** (FIESER and NEWMAN) 1936, 114, 705
Iso-, degradation (JACOBS and BIGELOW) 1933, 101, 15
- Ovalbumin:** Amide nitrogen (SHORE, WILSON, and STUECK) 1935-36, 112, 407
Isoelectric point, factors influencing (SMITH) 1936, 113, 473
- Ovariectomy:** Body glycogen, effect (GULICK, SAMUELS, and DEUEL) 1934, 105, 29
- Ovary:** Activity, blood lipids, effect (LORENZ, ENTENMAN, and CHAIKOFF) 1937-38, 122, 619
Estrogen, ketonic (WESTERFELD, MACCORQUODALE, THAYER, and DOISY) 1938, 123, cxxvi
Follicular hormone (MACCORQUODALE, THAYER, and DOISY) 1935, 109, lviii
- Ovary—continued:**
Lipid, pregnancy, relation (BOYD) 1935, 108, 607
1935-36, 112, 591
Pig, progesterone, crystalline, preparation (ALLEN and GOETSCH) 1936, 116, 653
- Ovoverdin:** Lobster egg (STERN and SALOMON) 1937-38, 122, 461
- Oxalate:** Blood plasma phospholipid, effect (SCHMIDT) 1935, 109, 449
— — sugar, effect (NEUWIRTH) 1937, 120, 463
— serum and plasma cholesterol, effect (SPERRY and SCHOENHEIMER) 1935, 110, 655
- Oxalic acid:** Formation (WILEY, BERGEN, and BLOOD) 1937, 119, cv
- Oxidase:** Ascorbic acid (TAUBER, KLEINER, and MISHKIND) 1935, 110, 211
— —, copper relation (STOTZ, HARRER, and KING) 1937, 119, xcv, 511
— —, vegetables (KERTESZ, DEARBORN, and MACK) 1936, 116, 717
- Choline (BERNHEIM and WEBSTER) 1937, 119, xi
- Cytochrome. *See* Cytochrome oxidase
- Hex-, complement function, effect (ECKER, PILLEMER, MARTIENSEN, and WERTHEIMER) 1938, 123, 359
- Indophenol. *See* Indophenol oxidase
- Milk and muscle, synergistic

Oxidase—continued:

- action (MACHT and BRYAN)
1935, 110, 101
- Succin-, inhibitors (POTTER
and ELVEHJEM)
1937, 117, 341
- Tissue, dietary iron and copper,
relation (COHEN and EL-
VEHJEM) 1934, 107, 97
- Xanthine, liver, *p*-aminophenol
action (BERNHEIM and
BERNHEIM)
1938, 123, 307
- Oxidation(s):** β , quantitative
(BUTTS) 1934, 105, xv
(BUTTS, CUTLER, HALLMAN,
and DEUEL)
1935, 109, 597
(DEUEL, BUTTS, HALLMAN,
and CUTLER)
1935-36, 112, 15
- Biological (BARRON and HAST-
INGS) 1934, 107, 567
(DEMEIO, KISSIN, and BAR-
RON) 1934, 107, 579
(BARRON, DEMEIO, and
KLEMPERER)
1935-36, 112, 625
(BARRON) 1936, 113, 695
(BARRON, BARRON, and
KLEMPERER)
1936, 116, 563
(LYMAN and BARRON)
1937, 121, 275
(BARRON) 1937, 121, 285
(BARRON and LYMAN)
1938, 123, 229
- , metal catalysts and tissue
inhibitors, effect (KHARASCH,
LEGAULT, WILDER, and GE-
RARD) 1936, 113, 557
- , — —, effect (KHARASCH,

Oxidation(s)—continued:

- LEGAULT, WILDER, and GE-
RARD) 1936, 113, 537
- Catalytic (MEYER)
1933, 103, 25, 39, 597, 607
- Dinitrocresol effect (KRAHL
and CLOWES)
1935, 111, 355
- Stimulants and depressants
(CLOWES and KRAHL)
1935, 109, xxi
- Tissue, method for study
(POTTER and ELVEHJEM)
1936, 114, 495
- Two-step (MICHAELIS and
SCHUBERT)
1937, 119, 133
- Oxidation-reduction:** (BALL and
CHEN) 1933, 102, 691
(BALL) 1934, 106, 515
1936, 114, 649
1937, 118, 219
- Reactions, aqueous, velocity,
equivalent-valence effect
(SHAFFER)
1934, 105, lxxviii
- Systems, biological action
(FISHBERG and DOLIN)
1933, 101, 159
- , equilibria, spectrophoto-
metric determination (STOTZ,
SIDWELL, and HOGNESS)
1938, 123, cxviii
1938, 124, 11
- Oxygen:** Absorption, oleic acid,
ferricyanide, catalytic effect
(CHOW and KAMERLING)
1934, 104, 69
- Blood, capacity (JOHNSON and
HANKE) 1936, 114, 157
- , — and content, glutathione
state, relation (OBERST and
WOODS) 1935, 111, 1

Oxygen—continued:

- Blood, determination, ether presence, Van Slyke-Neill modified method (SHAW and DOWNING) 1935, 109, 405
- , microdetermination (DONAL) 1934, 105, xxi
- , ultramicrodetermination (DONAL) 1934, 106, 783
- , venous, fever therapy and oxygen administration effect (ADAMS and BOOTHBY) 1936, 114, iii
- Catalase inactivation, marine animals (MARKS) 1934, 105, 489
- Consumption, kidney, measurement, direct (MASON, BLALOCK, and HARRISON) 1936, 114, lxiv
- , *l*-lactate and *d*-lactate influence (BUCHWALD, CORI, and FISHER) 1933, 103, 763
- Dissociation curves, blood, bird (CHRISTENSEN and DILL) 1935, 109, 443
- Fructose destruction, factors influencing (CLINTON and HUBBARD) 1937, 119, 467
- Glucose destruction, factors influencing (CLINTON and HUBBARD) 1937, 119, 467
- Hemoglobin affinity, altitude effect (HALL) 1936, 115, 485
- denaturation (HISEY) 1938, 123, lvi
- , equilibrium, salt effect (SIDWELL, MUNCH, BARRON, and HOGNESS) 1938, 123, 335

Oxygen—continued:

- Hemoglobin, union (ADAMS) 1934, 105, iii
- Mussel catalase, inactivation (MARKS and FOX) 1933, 103, 269
- Pressure, low, liver and muscle glycogen, effect (EVANS) 1934, 105, xxvi
- Respiratory pigments, equilibrium between (ADAMS) 1937, 119, iii
- Tension, amino acids, kidney deamination effect (KEMPNER) 1938, 124, 229
- Tissue uptake, avitaminosis (SURE and DEWITT) 1938, 123, cxx
- Uncombined, blood, solubility and physical state (SENDROY, DILLON, and VAN SLYKE) 1934, 105, 597
- Uptake, hemoglobin, dried (HISEY) 1937, 119, xlix
- , skin, rats, vitamin G deficiency (ADAMS) 1936, 116, 641
- Oxyhemoglobin:** Carbamate equilibrium (STADIE and O'BRIEN) 1937, 117, 439
- Light absorption, concentration effect (RAY and BLAIR) 1935, 111, 371
- Oxytocic hormone:** Pituitary, posterior, electrophoresis (IRVING and DU VIGNEAUD) 1938, 123, 485
- Oxytocic substance:** Pituitary gland, posterior, preparation (STEHLE) 1933, 102, 573
- See also* Uterus-contracting substance

P

- Palmitic acid:** Monohydroxy-, butter fat (BOSWORTH and HELZ) 1935-36, 112, 489
- Stearic acid conversion, deuterium as indicator (SCHOENHEIMER and RITTENBERG) 1937, 120, 155
- Pancreas:** Antiglyoxalase (WOODWARD, MUNRO, and SCHROEDER) 1935, 109, 11
- Blood lipids, depancreatized dogs with insulin, ingestion effect (CHAIKOFF and KAPLAN) 1935-36, 112, 155
- Enzymes, dehydration effect (ROSS and SHAW) 1934, 104, 131
- Esterase, vitamin B deficiency influence (SURE, KIK, and BUCHANAN) 1935, 108, 27
- Insulin antagonism and synergism (MACALLUM) 1938, 123, lxxviii
- , cattle, age effect (FISHER and SCOTT) 1934, 106, 305
- Lipase (WEINSTEIN and WYNNE) 1935-36, 112, 641
- , action (BALLS and MATLACK) 1938, 123, 679
- activity, factors influencing (WEINSTEIN and WYNNE) 1935-36, 112, 649
- , crude, glyceride hydrolysis (BALLS, MATLACK, and TUCKER) 1937-38, 122, 125

Pancreas—continued:

- Lipase, specificity and inhibition (WEBER and KING) 1935, 108, 131
- , vitamin B deficiency influence (SURE, KIK, and BUCHANAN) 1935, 108, 27
- Lipotropic agent (AYLWARD and HOLT) 1937, 121, 61
- Liver lipids, depancreatized dog with insulin, feeding effect (KAPLAN and CHAIKOFF) 1937, 119, 435
- Proteinase, egg albumin, crystalline, hydrolysis (CALVERY) 1933, 102, 73
- See also* Callicrein
- Pancreatectomy:** -Adrenalectomy, effect (LONG and LUKENS) 1935, 109, lvi
- Blood fatty acids, effect (LICHTMAN) 1937, 120, 35
- glucose, effect (LICHTMAN) 1937, 120, 35
- lipid metabolism, choline and insulin effect (KAPLAN and CHAIKOFF) 1937, 120, 647
- lipids, insulin effect (CHAIKOFF and KAPLAN) 1934, 106, 267
- —, pancreas ingestion and insulin effect (CHAIKOFF and KAPLAN) 1935-36, 112, 155
- Carbohydrate metabolism (BARKER, CHAMBERS, and DANN) 1937, 118, 177
- Glucose tolerance, fructose effect (FLETCHER and WATERS) 1937, 119, xxxiii

Pancreatectomy—continued:

Glycogen resynthesis (LONG,
LUKENS, and FRY)

1934, 105, lii

-Hypophysectomy, effect
(LONG and LUKENS)

1935, 109, lvi

Liver fat, insulin effect (CHAI-
KOFF and KAPLAN)

1937, 119, 423

— lipid metabolism, choline
and insulin effect (KAPLAN
and CHAIKOFF)

1937, 120, 647

— lipids, insulin effect (KAP-
LAN and CHAIKOFF)

1935, 108, 201

— —, pancreas feeding and in-
sulin effect (KAPLAN and
CHAIKOFF)

1937, 119, 435

Respiratory quotient, galactose
ingestion effect (ROE, GIL-
MAN, and COWGILL)

1934, 105, lxxii

Pantothenic acid: Yeast growth
effect (WILLIAMS and SAUN-
DERS)

1934, 105, xcix

(RICHARDS)

1936, 113, 531

Papain: Activity, metal com-
pounds, influence (HELLER-
MAN and PERKINS)

1934, 107, 241

—, oxidation-reduction influ-
ence (HELLERMAN and PER-
KINS)

1934, 107, 241

Digestion, egg white toxicity,
effect (PARSONS, JANSSEN,
and SCHOENLEBER)

1934, 105, lxxvii

Enzymes, activation (BERG-
MANN and ROSS)

1936, 114, 717

Papain—continued:

-Hydrocyanic acid, egg albu-
min, crystalline, hydrolysis
(CALVERY)

1933, 102, 73

Inactivation, iodine (BERG-
MANN and ZERVAS)

1936, 114, 711

l-Lysine peptides, effect (BERG-
MANN, ZERVAS, and ROSS)

1935, 111, 245

Milk-clotting action (BALLS
and HOOVER)

1937, 121, 737

Peptidase I, specificity (BERG-
MANN, ZERVAS, and FRUTON)

1936, 115, 593

Proteolytic systems (BERG-
MANN and ROSS)

1935, 111, 659

Specificity (BERGMANN, ZER-
VAS, and FRUTON)

1935, 111, 225

Sulfur distribution (KASSELL
and BRAND)

1938, 125, 435

Test (SUMNER and HOWELL)

1935, 109, 429

Papilloma: Virus protein, hy-
drogen ion concentration sta-
bility (BEARD and WYCKOFF)

1938, 123, 461

Paralysis: Anti-, vitamin, chick
(JUKES and BABCOCK)

1938, 123, lxxv

-Preventing factor, chick
(JUKES and BABCOCK)

1938, 125, 169

Vitamin E-deficient rats, young
from (OLCOTT)

1937, 119, lxxiv

Parathormone: Blood plasma
calcium diffusibility, effect

Parathormone—continued:

(GILLIGAN, VOLK, and ALT-SCHULE) 1933, 103, 745

Parathyroid: Hormone, acid and alkali action (TWEEDY, SMULLEN, and BELL)

1936, 116, 163

—, ammonolyzed, reactions (ROBERTS, TWEEDY, and SMULLEN)

1935-36, 112, 209

—, chemistry (TWEEDY, BELL, and VICENS-RIOS)

1935, 108, 105

—, kidney insufficiency effect (TWEEDY, TEMPLETON, and McJUNKIN) 1935, 109, xcii

—, potency, oxidizing and reducing agents, effect (TWEEDY, BELL, and VICENS-RIOS)

1934, 105, xcv

Hypertrophy, dietary (BAUMANN and SPRINSON)

1937, 119, vii

Tetany, blood serum phosphate relation (JONES)

1936, 114, liv

1936, 115, 371

Vitamin D relation (JONES)

1935, 109, xlv

1935, 111, 155

Parathyroidectomy: Rickets, effect (JONES)

1934, 106, 701

Parathyroid extract: (MORGAN, KIMMEL, THOMAS, and SAMISCH) 1934, 106, 531

Liver poisons, influence (GREENBERG)

1935, 109, xxxviii

Parathyroid extract—continued:

Rachitic cartilage calcification, effect (McLEAN and McCoy) 1936, 114, lxxv

Tissue effect (MORGAN and SAMISCH) 1934, 105, lxiv

1935, 108, 741

Toxicity, dog and rat (JONES) 1936, 114, liv

Paratyphoid: Infection, tissue cholesterol, effect (SPERRY and STOYANOFF)

1934, 105, lxxxii

Parotid: Saliva, human, protein (BRAMKAMP)

1936, 114, 369

—, inorganic constituents (BAXTER) 1933, 102, 203

Pea: Cow-, leaves, carotenoid pigments, absorption spectra (HILBERT and JANSEN)

1934, 106, 97

Peanut: Proteins, nutritive value (BAERNSTEIN)

1937-38, 122, 781

Pear: Coating, wax-like (MARKLEY, HENDRICKS, and SANDO) 1935, 111, 133

Pecten: Muscle, basic extractives (MOORE and WILSON)

1934, 105, lxiii

—, nitrogenous extractives (MOORE and WILSON)

1936, 114, lxxi

Pectic enzymes: (KERTESZ)

1937, 121, 589

Pectic substances: Wood, isolation (ANDERSON)

1935-36, 112, 531

(ANDERSON, SEIGLE, KRZNA-RICH, RICHARDS, and MARTENY) 1937, 121, 165

- Pectin:** -Methoxylase activity, determination (KERTESZ) 1937, 121, 589
- Polygalacturonic acid-methylglycosides (MORELL, BAUR, and LINK) 1934, 105, 1
- Pektolactonsäure:** Ehrlich's, polygalacturonic acid-methylglycosides from (BAUR and LINK) 1935, 109, 293
- Pektolsäure:** Ehrlich's, polygalacturonic acid-methylglycosides from (BAUR and LINK) 1935, 109, 293
- Pellagra:** Anti-, factor, concentration (KOEHN and ELVEHJEM) 1937, 118, 693
- Epidermis cystine and iron, relation (LEWIS) 1934, 105, lii
- Human, vitamin G complex relation (DANN) 1936, 114, xxiv
- Like symptoms, egg white-produced, curative factor (LEASE, KELLY, and PARSONS) 1936, 114, lxi
- Pentocystine:** Availability (DYER and DU VIGNEAUD) 1935, 108, 73
- Synthesis (DU VIGNEAUD, DYER, JONES, and PATTERSON) 1934, 106, 401
- Pentosan:** Bran, feces fatty acids, volatile, influence (OLMSTED, CURTIS, and TIMM) 1935, 108, 645
- Pentose(s):** Furanose derivatives, preparation (LEVENE and COMPTON) 1936, 116, 189
- Pentose(s)—continued:**
- Metabolism (SILBERMAN and LEWIS) 1933, 101, 741
- Urine, hydrogen peroxide action (ENKLEWITZ) 1936, 116, 47
- , origin (ENKLEWITZ and LASKER) 1935, 110, 443
- Yeast nucleic acid, xylose and 5-methyl monoacetone xylose phosphoric esters, relation (LEVENE and RAYMOND) 1933, 102, 347
- Pepper:** Pigments (BROWN) 1935, 110, 91
- , polyhydroxy acid (BAUMANN, SPRINSON, and METZGER) 1935, 109, v
- 1937, 119, viii
- Pepsin:** Activity, mechanical vibration influence (CHAMBERS) 1937, 117, 639
- Amide solutions, properties (STEINHARDT) 1938, 123, 543
- Casein digestion (JONES and GERSDORFF) 1934, 105, xlii
- 1934, 106, 707
- —, cystine test (JONES and GERSDORFF) 1933, 101, 657
- Crystalline, amino acid determination (CALVERY, HERRIOTT, and NORTHROP) 1936, 113, 11
- , analysis (CALVERY, HERRIOTT, and NORTHROP) 1935, 109, xvi
- , solubility (STEINHARDT) 1938, 123, cxv
- Digestion, tissues, iron in (McFARLANE) 1934, 106, 245

Pepsin—continued:

- Edestin, crystalline, partial hydrolysis products (WHITE) 1937, 119, ciii
- Egg albumin, crystalline, hydrolysis (CALVERY) 1933, 102, 73
- —, —, —, amino acids and amino nitrogen liberation rate (CALVERY, BLOCK, and SCHOCK) 1936, 113, 21
- —, —, — products, fractionation (CALVERY) 1935–36, 112, 171 (CALVERY and SCHOCK) 1936, 113, 15
- —, hydrolysis (CALVERY and SCHOCK) 1935, 109, xvi
- Gastric juice protein, relation (MARTIN) 1933, 102, 131
- Inactivation, protease (TAUBER and KLEINER) 1934, 105, 411
- Insulin hydrolysis (FISHER and SCOTT) 1934, 106, 289
- Lactalbumin hydrolysis (MILLER) 1935, 109, lxvi
- Proteins derived by, arginase action (KRAUS-RAGINS) 1938, 123, 761
- Thyroid protein digest, thyroxine (FOSTER, PALMER, and LELAND) 1936, 115, 467
- Trypsin and, digestion (TAUBER and KLEINER) 1934, 105, xc
- Urea solutions, properties (STEINHARDT) 1938, 123, 543
- Yeast, determination (HECHT and CIVIN) 1936, 116, 477

Pepsin—continued:

- Zymogens (KLEINER and TAUBER) 1934, 106, 501
- Peptidase(s): Amino-, specificity (BERGMANN and FRUTON) 1937, 117, 189
- Aminopoly-, cystinyl peptides as substrates (GREENSTEIN) 1938, 124, 255
- , intestine, specificity (JOHNSON) 1937–38, 122, 89
- Bacterial, systems, properties (BERGER and JOHNSON) 1938, 123, ix
- Carboxy-, specificity (BERGMANN and FRUTON) 1937, 117, 189
- Di-, cystinyl peptides as substrates (GREENSTEIN) 1938, 124, 255
- , embryo, cephalic region, chick (LEVY and PALMER) 1938, 123, lxxiv
- , — extracts, chick (PALMER and LEVY) 1938, 123, xc
- , specificity (BERGMANN, ZERVAS, FRUTON, SCHNEIDER, and SCHLEICH) 1935, 109, 325
- I, papain specificity (BERGMANN, ZERVAS, and FRUTON) 1936, 115, 593
- Inflammatory exudates, pleural, activity (WEISS, KAPLAN, and LARSON) 1938, 125, 247
- Leuconostoc mesenteroides* (BERGER, JOHNSON, and PETERSON) 1938, 124, 395
- Magnesium-activated leucyl, erepsin, animal (JOHNSON,

Peptidase(s)—*continued*:

JOHNSON, and PETERSON)

1936, 116, 515

System, *Aspergillus parasiticus*

(JOHNSON and PETERSON)

1935-36, 112, 25

Peptide(s): (DUNN and ROSS)

1938, 125, 309

Amino groups, free, allocation

(GURIN and CLARKE)

1934, 107, 395

Arginine, physical constants

(GREENSTEIN)

1933, 101, 603

Aspartic acid, physical constants

(GREENSTEIN)

1933, 101, 603

Bonds, enzyme synthesis

(BERGMANN and FRAENKEL-

CONRAT)

1938, 124, 1

(BERGMANN and BEHRENS)

1938, 124, 7

Cystinyl, aminopolypeptidase

and dipeptidase, substrate

relation (GREENSTEIN)

1938, 124, 255

—, physical chemistry (GREEN-

STEIN, KLEMPERER, and

WYMAN)

1938, 125, 515

Dissociation constants, appar-

ent acid, aqueous formalde-

hyde solution (DUNN and

LOSHAKOFF)

1936, 113, 691

(DUNN and WEINER)

1937, 117, 381

Formol titration, glass elec-

trode (DUNN and LOSHA-

KOFF)

1936, 113, 359

Glutamic acid, physical constants

(GREENSTEIN)

1933, 101, 603

Peptide(s)—*continued*:

Heavy water and proteolytic

enzymes, action (FOSTER,

KESTON, RITTENBERG, and

SCHOENHEIMER)

1938, 124, 159

Histidine, physical constants

(GREENSTEIN)

1933, 101, 603

Lysine, nitrous acid, behavior

(GREENSTEIN)

1933, 101, 603

—, physical constants (GREEN-

STEIN)

1933, 101, 603

l-Lysine, papain effect (BERG-

MANN, ZERVAS, and ROSS)

1935, 111, 245

—, synthesis (BERGMANN,

ZERVAS, and ROSS)

1935, 111, 245

Multivalent (GREENSTEIN)

1935, 109, 529, 541

(GREENSTEIN and JOSEPH)

1935, 110, 619

(GREENSTEIN)

1935-36, 112, 35, 517

1936, 116, 463

1937, 118, 321

1937, 121, 9

Salts, complex (BERGMANN and

FOX)

1935, 109, 317

(BERGMANN)

1935, 110, 471

1937-38, 122, 569

Solubility (COHN and Mc-

MEEKIN)

1936, 114, xx

Solutions, neutral salts, action

(COHN, McMEEKIN, and

GREENSTEIN)

1935, 109, xxi

—, thermodynamic properties

(SMITH)

1938, 123, cx

Peptide(s)—*continued*:

Sulfur-containing amino acids, metabolism (WHITE, LEWIS, and WHITE)

1937, 117, 663

Tyrosine, physical constants (GREENSTEIN)

1933, 101, 603

Peptone: Shock, coagulation defect (QUICK)

1936, 114, lxxxii

Perchloric-acetic acid: Amino acid titration, use (TOENIES and CALLAN)

1938, 125, 259

Periodic acid: Starch and dextrin oxidation (CALDWELL and HIXON)

1938, 123, 595

Periplogenin: Derivatives, degradation (JACOBS and ELDERFIELD)

1933, 102, 237

Trianhydro- (JACOBS and BIGELOW)

1933, 101, 697

—, derivatives, ultraviolet absorption spectra (ELDERFIELD and ROTHEN)

1934, 106, 71

Perosis: Manganese effect (GALLUP and NORRIS)

1937, 119, xxxvi

Peroxidase: (BALLS and HALE)

1934, 107, 767

Liver (DUNN and MORGULIS)

1937, 118, 545

Perspiration: (DILL, DALY, and BOCK)

1936, 114, xxv

Phaseolus vulgaris: *See* Bean

Phenaceturic acid: Hippuric acid and, synthesis and excretion rates, comparison (TULANE and LEWIS)

1933, 103, 151

Phenanthrenequinonesulfonate:

Oxidation, two-step (MICHAELIS and SCHUBERT)

1937, 119, 133

Phenazine: N-Methyl- β -oxy-, oxidation-reduction potentials (PREISLER and HEMPELMAN)

1936, 114, lxxxii

Phenethyl acids: Normal series, configurational relationship (LEVENE and MARKER)

1935, 110, 311

Phenol(s): *p*-Amino-, liver xanthine oxidase, action (BERNHEIM and BERNHEIM)

1938, 123, 307

Blood (SCHMIDT, SCHMULOVITZ, SZCZPINSKI, and WYLIE)

1937, 120, 705

Determination (EDWARDS)

1935, 109, xxviii

(STOUGHTON)

1936, 115, 293

—, bromometric (EDWARDS)

1937, 119, xxix

Dihalo-, metabolism effect, mechanism (CLOWES and KRAHL)

1936, 114, xix

Dinitro-, metabolism effect, mechanism (CLOWES and KRAHL)

1936, 114, xix

—, muscle, frog, metabolism effect (RONZONI and EHRENFEST)

1936, 115, 749

—, organ and tissue proteins, thyroidectomy, effect (ADDIS, KARNOFSKY, LEW, and POO)

1938, 124, 33

α -Dinitro-, organ vitamin C, ascorbic acid administration with, effect (SVIRBELY)

1935, 111, 147

Phenol(s)—*continued*:

-Related substances, determination, bromometric (EDWARDS)

1937, 119, xxix

Substituted, dissociation, physiological action, relation (KRAHL) 1938, 123, lxxii

—, metabolic stimulation, carbon dioxide tension, effect (KRAHL and CLOWES)

1937, 119, lx

Trihalo-, metabolism effect, mechanism (CLOWES and KRAHL) 1936, 114, xix

Water contaminated with, effect (HELLER and PURSELL) 1937, 119, xlvi

Phenolase: Activity, determination (SAMISCH)

1935, 110, 643

Phenolic substances: Urine (EDWARDS)

1936, 114, xxix

Phenol red: Blood plasma protein binding, effect (SMITH and SMITH) 1938, 124, 107

Phosphate buffer-, solution, blood serum effect (ROBINSON, PRICE, HOGDEN, NELSON, and CULLEN)

1936, 114, lxxxiv

Phenylacetic acid: Detoxication (AMBROSE, POWER, and SHERWIN) 1933, 101, 669

Phenylalanine: *dl*-, metabolism (BUTTS, DUNN, and HALLMAN) 1938, 123, 711

—, ultraviolet absorption spectrum (FERAUD, DUNN, and KAPLAN)

1935-36, 112, 323

Phenylalanine—*continued*:

Growth relation (WOMACK and ROSE) 1934, 107, 449

Insulin, crystalline, isolation (JENSEN and EVANS)

1935, 108, 1

Oxidation, livers and kidneys (BERNHEIM and BERNHEIM)

1934, 107, 275

Protein material, spectroscopic identification (ROSS)

1934, 104, 531

Phenylcarbinols: Separation (LEVENE and MARKER)

1933, 103, 373

Phenyl chlorides: Separation (LEVENE and MARKER)

1933, 103, 373

Phenylhydantoin: Cystine, decomposition (ANDREWS and ANDREWS) 1933, 102, 253

Phenylhydrazine: *p*-Bromo-, derivatives, *d*-galacturonic acid and *d*-mannuronic acid (NIEMANN, SCHOEFFEL, and LINK) 1933, 101, 337

Derivatives, *d*-galacturonic acid (NIEMANN, SCHOEFFEL, and LINK) 1933, 101, 337

Phenylpropylamine: β -, nitrous acid and nitrosyl chloride action (LEVENE and MARKER) 1933, 103, 373

Phlorhizin: Acetone bodies, production, hydrazine effect (GREENBERG)

1935-36, 112, 431

Action (WALKER and REISINGER) 1933, 101, 223

Amino acids and fatty acids, catabolism, effect (CORLEY and LEIGHTY)

1936, 114, xxii

Phlorhizin—*continued*:

Blood serum phosphatase, effect (ANDERSON and SQUIRES) 1938, 124, 71

Ketosis (GOLDFARB, BARKER, and HIMWICH)

1934, 105, 283

Protein metabolism, effect (HOWLAND and HAWKINS)

1938, 123, 99

Phosphatase(s): Bile, activation, bile fistula effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1937, 121, 715

Blood, blood organic phosphorus, hydrolysis, nature (KERR and ANTAKI)

1937, 121, 531

— plasma, age relation (STEARNS and WARWEG)

1933, 102, 749

— —, fluorine effect (SMITH and LANTZ)

1935-36, 112, 303

— serum (BODANSKY and JAFFE)

1934, 105, xi

— —, activation, ascorbic acid effect (THANNHAUSER, REICHEL, and GRATTAN)

1937, 121, 697

— —, —, bile fistula effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1937, 121, 715

— —, —, biliary obstruction, effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1937, 121, 709

— —, activity, thiol compounds and bile acids, effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1937, 121, 721

Phosphatase(s)—*continued*:

Blood serum, determination (BODANSKY) 1933, 101, 93

1937, 120, 167

— —, disease effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1937, 121, 727

— —, high activity, normal serum, effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK)

1938, 124, 631

— —, jaundice (BODANSKY and JAFFE)

1935, 109, x

(FREEMAN, CHEN, and IVY)

1938, 124, 79

— —, jaundiced blood, effect (FREEMAN and CHEN)

1938, 123, 239

— —, liver injury, effect (BODANSKY)

1938, 123, xiv

— —, new born puppies (BODANSKY)

1934, 104, 717

— —, non-osseous origin, carbohydrate ingestion effect (BODANSKY)

1934, 104, 473

— —, phlorhizin effect (ANDERSON and SQUIRES)

1938, 124, 71

— —, vitamins D and A, effect (CRIMM and STRAYER)

1935-36, 112, 511

Bone, α -amino acids, effect (BODANSKY)

1936, 114, 273

—, blood organic phosphorus, hydrolysis, nature (KERR and ANTAKI)

1937, 121, 531

—, bone extract effect (LANDAUER, UPHAM, and RUBIN)

1935, 108, 121

Phosphatase(s)—*continued*:

- Bone, fluorine effect (SMITH and LANTZ)
1935-36, 112, 303
- Diphospho-*l*-glyceric acid hydrolysis (BODANSKY and BAKWIN) 1934, 104, 747
- Identification, bile acids as aid (BODANSKY)
1937, 118, 341
- Intestine, α -amino acids and magnesium, effect (BODANSKY) 1936, 115, 101
- Kidney, α -amino acids and magnesium, effect (BODANSKY) 1936, 115, 101
- , blood organic phosphorus, hydrolysis, nature (KERR and ANTAKI)
1937, 121, 531
- , physiological materials, effect (PYLE, FISHER, and CLARK) 1937, 119, 283
- , vasoligated (KINARD and CHANUTIN) 1933, 103, 461
- Marine invertebrates (NORRIS and RAO) 1935, 108, 783
- Polydiamino-, polydiaminophosphatide hydrolysis, cerebrosidase relation (THANNHAUSER and REICHEL) 1936, 113, 311
- Rat (KINARD and CHANUTIN) 1933, 103, 461
- Tissue extracts, activity, measurement (BAKWIN and BODANSKY)
1933, 101, 641
- , vitamins D and A, effect (CRIMM and STRAYER)
1935-36, 112, 511
- Tooth, fluorine effect (SMITH and LANTZ)
1935-36, 112, 303

Phosphate(s): Blood (SAHYUN)

- 1933, 101, 295
- calcium and, relation (MCLEAN and HINRICHS)
1935, 109, lxiii
- serum and edema fluids, concentration, comparison (GILLIGAN, VOLK, and ALTSCHULE) 1933, 103, 745
- —, parathyroid tetany, relation (JONES)
1936, 115, 371
- —, tetany, parathyroid, relation (JONES)
1936, 114, liv
- Bone, molecular constitution (HODGE, BALE, and LEFEVRE) 1937, 119, xlix
- Buffer-phenol red solution, blood serum effect (ROBINSON, PRICE, HODGEN, NELSON, and CULLEN)
1936, 114, lxxxiv
- Compounds, liver, autolysis effect (FLOCK)
1936, 115, 207
- , —, diet effect (FLOCK, BOLLMAN, and MANN)
1936, 114, xxxvi
1936, 115, 179
- , —, substances affecting (FLOCK, BOLLMAN, and MANN) 1936, 115, 201
- Hydrogen peroxide system, alkaline, fatty acid oxidation, mechanism (WITZEMANN) 1934, 107, 475
- Inorganic, aqueous humor, frog and higher animals (WALKER)
1933, 101, 269
- , blood, frog and higher animals (WALKER)
1933, 101, 269

Phosphate(s)—continued:

Inorganic, blood, goat (CUTLER)
1934, 106, 653

—, — serum, determination
(BODANSKY)

1937, 120, 167

—, cerebrospinal fluid, frog
and higher animals
(WALKER) 1933, 101, 269

—, lymph, frog and higher
animals (WALKER)

1933, 101, 269

—, urine, glomerulus, frog and
Necturus (WALKER)

1933, 101, 239

Lipoid phosphorus, conversion
to, tissues, radioactive phos-
phorus as indicator (ENTEN-
MAN, RUBEN, PERLMAN,
LORENZ, and CHAIKOFF)

1938, 124, 795

Organic, *Limulus polyphemus*
muscle, distribution (ENGEL
and CHAO)

1935, 108, 389

Rachitic cartilage calcifica-
tion, administration effect
(McLEAN and McCoy)

1936, 114, lxxv

Tooth, molecular constitu-
tion (HODGE, BALE, and
LEFEVRE)

1937, 119, xlix

Yeast zymine fermentation,
electrolytes and ethanol
effect (STAVELY, CHRISTEN-
SEN, and FULMER)

1935, 111, 791

Phosphatide(s): Blood serum,
precipitation (TURNER)

1934, 105, xciv

Determination and stability
(MAN)

1937, 117, 183

Phosphatide(s)—continued:

Diamino-, organs and fluids,
determination (THANN-
HAUSER and SETZ)

1936, 116, 533

Ether-insoluble, blood plasma
and red blood cells, adults
(KIRK) 1938, 123, 637

—, —, red blood cells, and
tissues, microdetermination
(KIRK) 1938, 123, 623

Fatty acids, suprarenals, beef
(AULT and BROWN)

1934, 107, 607

Lactobacillus acidophilus, frac-
tion (CROWDER and ANDER-
SON) 1934, 104, 487

Polydiamino-, hydrolysis, poly-
diaminophosphatase, cere-
brosidase relation (THANN-
HAUSER and REICHEL)

1936, 113, 311

—, reineckate, spleen
(THANNHAUSER and SETZ)

1936, 116, 527

Protamine salts, lipoproteins,
relation (CHARGAFF)

1938, 125, 661

Tubercle bacillus, human
(ANDERSON, LOTHROP, and
CREIGHTON)

1938, 125, 299

Phospho-d-arabinose: 5-, syn-
thesis (LEVENE and CHRIST-
MAN) 1938, 123, 607

Phosphocreatine: Brain (KERR)

1935, 110, 625

—, narcotics and convulsant
drugs, effect (KERR and
ANTAKI) 1937-38, 122, 49

Phosphoglycerate: Blood (WAR-
WEG and STEARNS)

1936, 115, 567

Phospholipid(s): Blood, adrenal-ectomy effect (YEAKEL and BLANCHARD)

1938, 123, 31

—, as transport mechanism (SINCLAIR)

1936, 115, 211

—, determination (ELLIS and MAYNARD)

1937, 118, 701

— plasma, oxalated and heparinized (SCHMIDT)

1935, 109, 449

Cephalin determination by choline estimation (WILLIAMS, ERICKSON, AVRIN, BERNSTEIN, and MACY)

1938, 123, 111

Fatty acids, muscle (SNIDER)

1936, 116, 503

— —, saturated and unsaturated (SINCLAIR)

1935, 111, 261

— —, tumor, unsaturation degree (HAVEN)

1935, 109, xlii

Formation and destruction, fasting, radioactive phosphorus as indicator (PERLMAN, RUBEN, and CHAIKOFF)

1937-38, 122, 169

Intestinal mucosa, fat absorption (SINCLAIR)

1937, 119, xc

— —, turnover (SINCLAIR and SMITH)

1937, 121, 361

Liver, fat metabolism relation (SINCLAIR)

1935, 111, 515

Metabolic and non-metabolic (SINCLAIR)

1936, 114, xciv

Phospholipid(s)—continued:

Metabolism, radioactive phosphorus as indicator (ENTENMAN, RUBEN, PERLMAN, LORENZ, and CHAIKOFF)

1938, 124, 795

—, — — — indicator, various organs (FRIES, RUBEN, PERLMAN, and CHAIKOFF)

1938, 123, 587

—, stomach and intestine, rôle, ingested fat effect (FRIES, RUBEN, PERLMAN, and CHAIKOFF)

1938, 123, 587

—, tumors (HAVEN)

1936, 114, xlvii

1937, 118, 111

Muscle activity, effect (BLOOR and SNIDER)

1934, 107, 459

(BLOOR) 1937, 119, 451

Phosphorus, blood plasma, hepatectomy, partial, and bile duct ligation, effect (CHANUTIN and LUDEWIG)

1936, 115, 1

—, — —, normal and nephrectomized rats (LUDEWIG)

1938, 123, lxxviii

—, radioactive, phosphorus distribution (HAVEN, BALE, and LEFEVRE)

1938, 123, lii

Respiratory quotient, effect (REISER and HANES)

1938, 123, ci

Tissue, elaidic acid, relation (SINCLAIR)

1935, 109, lxxxv

1935, 111, 515

—, fatty acids, unsaturated, selection and retention (SINCLAIR)

1935, 111, 275

Phospholipid(s)—*continued*:

Yeast (NEWMAN and ANDERSON) 1933, 102, 229

See also Lipid

Phosphoric acid: Esters, yeast extract (SMYTHE) 1937, 117, 135

Microdetermination, gasometric (KIRK)

1934, 105, xlvii

1934, 106, 191

Phosphorus: Acid-soluble fractions, blood, potassium relation (KERR)

1937, 117, 227

— organic, blood, hydrolysis, acid and enzyme (WARWEG and STEARNS)

1936, 115, 567

Blood, partition (STEARNS and WARWEG)

1933, 102, 749

—, —, chicken (HELLER, PAUL, and THOMPSON)

1934, 106, 357

— serum, partition (STEARNS and WARWEG)

1933, 102, 749

— —, —, laying hens (ROEPKE and HUGHES)

1935, 108, 79

Brain, rickets (KERR)

1937-38, 122, 53

Calcium and, intake levels, body calcium and growth, effect (TOEPFER and SHERMAN) 1936, 115, 685

Chick (ELVEHJEM and KLINE) 1933, 103, 733

-Deficient diet, basal metabolism (GOSS and KLEIBER)

1937, 119, xxxviii

Phosphorus—*continued*:

Dietary, hematopoiesis effect (DAY, STEIN, and MCCOLLUM) 1938, 123, xxviii

Food, body calcium, relation (WHITCHER, BOOHER, and SHERMAN)

1936, 115, 679

Gestation requirement (COX and IMBODEN)

1934, 105, xviii

Inorganic, blood cell, red, permeability (HALPERN)

1936, 114, 747

—, — plasma, dairy cattle (HAAG and JONES)

1935, 110, 439

—, — serum, age and nutrition, effect (PEARSON)

1934, 106, 1

—, —, —, forms (GREENBERG and LARSON)

1935, 109, 105

(BENJAMIN)

1935, 109, 123

—, —, —, hypercalcemia (BENJAMIN and HESS)

1933, 103, 629

—, —, —, new born puppies (BODANSKY)

1934, 104, 717

Lactation requirement (COX and IMBODEN)

1934, 105, xviii

Lipoid. *See* Lipoid phosphorus-Low diets, vitamin D₂ effect (SCHNEIDER and STEENBOCK) 1938, 123, cv

Metabolism, calcium-low ration, dairy cows, effect (MEIGS, TURNER, KANE, and SHINN)

1934, 105, lx

Phosphorus—continued:

Metabolism, nerve, invertebrate
(ENGEL and GERARD)

1935-36, 112, 379

—, radioactive phosphorus as
indicator (COHN and GREEN-
BERG) 1938, 123, 185

Muscle creatine, relation
(MANGUN and MYERS)

1938, 123, lxxix

Organic acid-soluble, erythro-
cytes (KERR and DAOUD)

1935, 109, 301

—, blood hydrolysis, phos-
phatases (KERR and AN-
TAKI) 1937, 121, 531

Phospholipid, blood plasma,
hepatectomy, partial, and
bile duct ligation, effect
(CHANUTIN and LUDEWIG)

1936, 115, 1

—, — —, normal and nephrec-
tomized rats (LUDEWIG)

1938, 123, lxxviii

Radioactive, distribution
(HAVEN, BALE, and LE-
FEVRE) 1938, 123, lii

—, phospholipid metabolism
indicator (PERLMAN, RUBEN,
and CHAIKOFF)

1937-38, 122, 169

(ENTENMAN, RUBEN, PERL-
MAN, LORENZ, and CHAI-
KOFF) 1938, 124, 795

—, — — —, various organs
(FRIES, RUBEN, PERLMAN,
and CHAIKOFF)

1938, 123, 587

Retention, carbon dioxide
effect (FORBES)

1934, 107, 283

Trout, brook, factors affecting
(McCAY, TUNISON, CRO-

WELL, and PAUL)

1936, 114, 259

Phosphorus compounds: Brain
(KERR) 1935, 110, 625

Phosphotungstic acid: Ascorbic
acid determination, pho-
tometric, use (KASSELL and
BRAND) 1938, 125, 115

Cysteine determination, pho-
tometric, use (KASSELL and
BRAND) 1938, 125, 115

Cystine determination, pho-
tometric, use (KASSELL and
BRAND) 1938, 125, 115

Disulfide compounds, reaction
rate (KASSELL and BRAND)
1938, 125, 131

Sulfhydryl compounds, reac-
tion rate (KASSELL and
BRAND) 1938, 125, 131

Phospho-12-tungstic acid: *dl*-
Cystine precipitation (TOEN-
NIES and ELLIOTT)

1934, 105, xciii

1935, 111, 61

l-Cystine precipitation (TOEN-
NIES and ELLIOTT)

1934, 105, xciii

1935, 111, 61

m-Cystine precipitation
(TOENNIES and ELLIOTT)

1934, 105, xciii

1935, 111, 61

Phospho-18-tungstic acid: A-,
cysteine and, color reaction,
molecular ratio (SHINOHARA)

1937, 120, 743

Ascorbic acid, reaction (SHINO-
HARA and PADIS)

1935-36, 112, 697

Cystine determination (SHINO-
HARA) 1935-36, 112, 683

Phospho-18-tungstic acid—continued:

Glutathione, reaction (SHINOHARA and PADIS)

1935-36, 112, 697

Non-thiol compounds, reaction (SHINOHARA)

1935, 110, 263

Thiol compounds, color reaction (SHINOHARA)

1935, 109, 665

Urine cysteine, cystine, and ascorbic acid, determination (SHINOHARA and PADIS)

1935-36, 112, 709

Photodynamic action: (SMETANA)

1938, 124, 667

1938, 125, 741

Photometer: Photoelectric comparison (Goudsmit and SUMMERSON)

1935, 111, 421

—, vitamin A determination (BILLS and WALLENMEYER)

1938, 123, xi

Phthiocerol: Tubercle bacillus, bovine (CASON and ANDERSON)

1937, 119, 549

— —, human (STODOLA and ANDERSON)

1936, 114, 467

(REEVES and ANDERSON)

1937, 119, 535

Phthiocol: Tubercle bacillus, determination, colorimetric (REEVES and ANDERSON)

1937, 119, 543

— —, human (BALL)

1934, 106, 515

— —, —, absorption spectrum curve, ultraviolet (CROWE)

1936, 115, 479

— —, —, chemical constitution (ANDERSON and NEWMAN)

1933, 103, 197

Phthiocol—continued:

Tubercle bacillus, determination, synthesis (ANDERSON and NEWMAN)

1933, 103, 405

(NEWMAN, CROWDER, and ANDERSON)

1934, 105, 279

Phthioic acid: Tubercle bacillus (SPIELMAN and ANDERSON)

1935-36, 112, 759

Physostigmine: Blood sugar, adrenals, demedullated and, effect (HARNED and COLE)

1938, 123, li

Picoline: α -, dissociation constant, basic (BARRON)

1937, 121, 313

Picrate: Precipitate, blood serum ultrafiltrates (GAEBLER and ABBOTT)

1937, 119, xxxvi

Pigment(s): Beet root, red, determination (PUCHER, CURTIS, and VICKERY)

1938, 123, 71

— —, —, preparation (PUCHER, CURTIS, and VICKERY)

1938, 123, 61

Blood, salt-low ration, realimentation effect (ORTEN and SMITH)

1934, 105, lxvi

Carotenoid, absorption spectra, liquid air temperatures (HILBERT and JANSEN)

1934, 106, 97

—, cow-pea leaves, absorption spectra, liquid air temperatures (HILBERT and JANSEN)

1934, 106, 97

Carotenoid-protein, lobster egg (STERN and SALOMON)

1937-38, 122, 461

Pigment(s)—*continued*:

- Grapefruit, pink (MATLACK)
1935, 110, 249
- Maize (SANDO, MILNER, and
SHERMAN)
1935, 109, 203
- Pimiento, egg yolk color, effect
(BROWN)
1937-38, 122, 655
- , Perfection (BROWN)
1935, 110, 91
- Plastid, marsh dodder (MAC-
KINNEY)
1935-36, 112, 421
- Respiratory, oxygen, equi-
librium between (ADAMS)
1937, 119, iii
- Tomato, American red and
purple (MATLACK and
SANDO)
1934, 104, 407
- Tubercle bacillus, human
(BALL)
1934, 106, 515
- —, —, absorption spectrum
curve, ultraviolet (CROWE)
1936, 115, 479
- —, —, acetone-soluble fat,
isolation (ANDERSON and
NEWMAN)
1933, 101, 773
- —, —, chemical constitu-
tion (ANDERSON and NEW-
MAN)
1933, 103, 197
- —, —, synthesis (ANDERSON
and NEWMAN)
1933, 103, 405
(NEWMAN, CROWDER, and
ANDERSON)
1934, 105, 279
- Pilocarpine: Gastric secretion,
effect (HOLLANDER and
SALTZMAN)
1938, 123, lix

- Pimelic acid: Diphtheria bacillus
growth accessory (MUEL-
LER)
1937, 119, 121
- Pimiento: Perfection, pigment,
red (BROWN)
1935, 110, 91
- Pigments, egg yolk color, effect
(BROWN)
1937-38, 122, 655
- Pine: Slash. *See* Slash-pine
- Pinus caribæa: *See* Slash-pine
- Piperazines: 2,5-Diketo-, hy-
drolysis (SRINIVASAN and
SREENIVASAYA)
1934, 105, 563
- Pipette: Gasometric analysis,
air-free reagents, storage
(GUEST and HOLMES)
1935, 110, 781
- Pituitary: Anterior, antidiuretic
factor (DOWNES and
RICHARDS)
1935, 110, 81
- , carbohydrate metabolism
hormone, assay (BERGMAN
and TURNER)
1938, 123, 471
- , follicle-stimulating and
luteinizing hormone (WAL-
LEN-LAWRENCE)
1934, 105, xcvii
- , growth preparation, sulfur
metabolism, effect (GAEBLER
and PRICE)
1936, 114, xxxix
- , inhibitory substances, pro-
duction (KATZMAN, WADE,
and DOISY)
1936, 114, lvi
- , ketonuria relation (DEUEL)
1934, 105, xix
- Gonadotropic hormone, chem-
istry (MAXWELL and BISCH-
OFF)
1935-36, 112, 215

Pituitary—continued:

Hormones, preparation (BATES and RIDDLE)

1938, 123, v

Iodine (BAUMANN and METZGER)

1938, 123, vi

Ketogenic principle, nature (SHIPLEY)

1938, 123, cix

-Like hormone, anterior, genital tract, effect (HARROW and NAIMAN)

1934, 105, xxxv

— — —, urine, pregnancy, separation (ELDEN)

1933, 101, 1

Posterior, oxytocic substance preparation (STEHLE)

1933, 102, 573

—, preparations, electrophoresis (DU VIGNEAUD, IRVING, DYER, and SEALOCK)

1938, 123, 45

—, press-juice, pressor and oxytocic hormones, electrophoresis (IRVING and DU VIGNEAUD)

1938, 123, 485

—, pressor substance preparation (STEHLE)

1933, 102, 573

Thyrotropic hormone, determination, chemical (McCULLAGH and STIMMEL)

1935, 109, lxii

Vitamin C distribution (GLICK and BISKIND)

1935, 110, 583

See also Hypophysectomy

Pituitary extract: Anterior, diacetic acid metabolism, rôle (BUTTS, CUTLER, and DEUEL)

1934, 105, 45

Pituitary extract—continued:

Anterior, growth hormone, gestation and weight of newborn, effect (WATTS)

1935, 109, xcv

—, — —, protein metabolism, effect (SCHAFER and LEE)

1935, 108, 355

—, — preparation, protein metabolism effect (GAEBLER and PRICE)

1937, 121, 497

Growth-promoting, thiamine deficiency, effect (BURKE and McINTYRE)

1938, 123, xvii

Placenta: Arginine (GRAFF and GRAFF)

1937, 121, 79

Blood coagulant (GREEN, LOWRY, ELEY, and MCKHANN)

1936, 114, xlii

Elaidic acid relation (McCONNELL and SINCLAIR)

1937, 118, 123

Globulins, immune (GREEN and MCKHANN)

1935, 109, xxxvii

Plant(s): Fat and sterol metabolism (MACLACHLAN)

1936, 113, 197

1936, 114, 185

Green, amides, metabolism (VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH)

1937, 119, 369

(VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN)

1938, 125, 527

Growth hormone production, *Rhizopus suinus* (THIMANN)

1935, 109, 279

Plant(s)—continued:

Hormones, structure and physiological activity (KOEFLI, THIMANN, and WENT)

1937-38, 122, 763

—, wound (ENGLISH and BONNER) 1937, 121, 791

Juice, reducing substances, non-sugar (SCHLENKER)

1937, 117, 727

—, sugars, reducing, micro-determination (SCHLENKER)

1933, 102, 29

Sterols, intestine, fate (BREUSCH)

1938, 124, 151

Tissue, acids, determination (PUCHER, VICKERY, and WAKEMAN)

1934, 105, lxviii

Plantago psyllium: See Psyllium

Plastid: Pigment, marsh dodder (MACKINNEY)

1935-36, 112, 421

Pneumococcus: Antipneumococcus serum globulins (GREEN) 1938, 123, xlv

Enzyme, autolytic, vitreous humor, umbilical cord, and streptococcus polysaccharide acids, hydrolysis by (MEYER, DUBOS, and SMYTH) 1937, 118, 71

Fractions, ultraviolet absorption spectra (LAVIN, THOMPSON, and DUBOS)

1938, 125, 75

Hemolysin, inactivation, metal compounds, effect (SHWACHMAN, HELLERMAN, and COHEN) 1934, 107, 257

—, —, oxidation and reduction, effect (SHWACHMAN, HEL-

Pneumococcus—continued:

LERMAN, and COHEN)

1934, 107, 257

Nucleic acid isolation (THOMPSON and DUBOS)

1938, 125, 65

Nucleoprotein fractions, isolation (THOMPSON and DUBOS)

1938, 125, 65

Type I, lipase action, effect (McGUIRE and FALK)

1934, 105, 669

— —, specific precipitate (CALVERY) 1935-36, 112, 167

— II, specific precipitate (CALVERY, HEIDELBERGER, and KENDALL) 1935, 109, xv

— III, polysaccharide, aldobionic acid structure (HOTCHKISS and GOEBEL)

1937, 121, 195

Types III and VIII, polysaccharides, capsular, chemical and immunological relationship (GOEBEL)

1935, 110, 391

Poison: Liver, parathyroid extract, influence (GREENBERG) 1935, 109, xxxviii

Toad, chemistry (JENSEN and EVANS) 1934, 104, 307

(JENSEN) 1935, 109, xlv

1937, 119, lii

Polarization: Tissue models (SPIEGEL-ADOLF)

1936, 114, xcix

Poliomyelitis: Metabolism (MAGERS) 1934, 105, lvi

Polydiaminophosphatase: Polydiaminophosphatide hydrolysis, cerebrosidase relation (THANNHAUSER and REICHEL) 1936, 113, 311

- Polydiaminophosphatide:** Hydrolysis, polydiaminophosphatase, cerebrosidase relation (THANNHAUSER and REICHEL) 1936, 113, 311
- Polydiaminophosphatide reineckate:** Spleen (THANNHAUSER and SETZ) 1936, 116, 527
- Polygalacturonic acid:** -Methylglycosides, Ehrlich's *Pektolsäure* and *Pektolactonsäure* (BAUR and LINK) 1935, 109, 293
- from pectin (MORELL, BAUR, and LINK) 1934, 105, 1
- Polygalacturonide:** Methyl ester, oxidation and hydrolysis to levo-tartaric acid (LEVENE and KREIDER) 1937, 120, 591
- Polygala senega:** See Senega-root
- Polygalitol:** Fate (CARR and KRANTZ) 1938, 124, 221
- Metabolism (CARR, FORMAN, and KRANTZ) 1938, 123, xviii
- Polyhydroxy acid:** Pepper, sweet (BAUMANN, SPRINSON, and METZGER) 1937, 119, viii
- Polyneuritis:** Vitamin B₁ determinations, criterion (KLINE, TOLLE, and NELSON) 1938, 123, lxix
- Polypeptide(s):** Degradation, stepwise (BERGMANN and ZERVAS) 1936, 113, 341
- Hydrolysis (SRINIVASAN and SREENIVASAYA) 1934, 105, 563
- Polysaccharide(s):** Gastric mucosa, pig (MEYER, SMYTH, and PALMER) 1937, 119, 73, lxix
- Pneumococcus Type III, aldobionic acid structure (HOTCHKISS and GOEBEL) 1937, 121, 195
- , Types III and VIII, chemical and immunological relationship (GOEBEL) 1935, 110, 391
- Specific, bacillus Calmette-Guérin (CHARGAFF and SCHAEFER) 1935-36, 112, 393
- Starch, apple tree leaf tissue, isolation and properties (NIEMANN, ANDERSON, and LINK) 1936, 116, 447
- , — — woody tissue, isolation and properties (NIEMANN, ROBERTS, and LINK) 1935, 110, 727
- Streptococcus, hemolytic, Group A mucoid strains (KENDALL, HEIDELBERGER, and DAWSON) 1937, 118, 61
- Synthesis, soil microorganism relation (HASSID and CHANDLER) 1937, 117, 203
- Tubercle bacillus, Strain H-37 (HEIDELBERGER and MENZEL) 1937, 118, 79
- Vitreous humor (MEYER and PALMER) 1934, 107, 629
- — and umbilical cord (MEYER and PALMER) 1936, 114, 689
- Polysaccharide acids:** Vitreous humor, umbilical cord, and streptococcus, hydrolysis by

- pneumococcus autolytic enzyme (MEYER, DUBOS, and SMYTH) 1937, 118, 71
- Polyuronic acids:** Vitreous humor and umbilical cord (MEYER and PALMER) 1936, 114, lxi
- Poppy:** California, petals, eschscholtzxanthin (STRAIN) 1938, 123, 425
- Porcupine:** Quills, amino acids, basic (BLOCK and HORWITT) 1937, 121, 99
- Porphyria:** Fox-squirrel (TURNER) 1937, 118, 519
- Porphyrin(s):** Copro-, I, embryo, formation (SCHÖNHEYDER) 1938, 123, 491
- Excretion, feces (DOBRINER) 1937, 120, 115
- , porphyrinuria, congenital (DOBRINER, LOCALIO, and STRAIN) 1936, 114, xxvi
- Urine, disease effect (DOBRINER) 1936, 113, 1
- Porphyrinuria:** Congenital, porphyrins, excretion (DOBRINER, LOCALIO, and STRAIN) 1936, 114, xxvi
- Potassium:** Biological fluids, determination, spectrographic (THOMSON and LEE) 1937, 118, 711
- materials, determination, volumetric (HARRISON and DARROW) 1937, 121, 631
- Blood, phosphorus fractions, acid-soluble, relation (KERR) 1937, 117, 227
- plasma, sodium and potassium intake effect
- Potassium—continued:**
- (POWER, WILDER, and CUTLER) 1938, 123, xciv
- Blood serum, determination (STRAUSS) 1937, 118, 331
- —, glucose injection effect (FLOCK, BOLLMAN, MANN, and KENDALL) 1938, 125, 57
- —, microdetermination, photoelectric (HOFFMAN) 1937, 120, 57
- —, —, photometric (HOFFMAN) 1937, 119, p. 1
- Determination, Shohl-Bennett method (HARTZLER) 1937-38, 122, 19
- , volumetric, with methylene blue (BOLLIGER) 1934, 107, 229
- Dietary, blood cell, red, sodium, influence (BUTLER and MACKAY) 1934, 106, 107
- Distribution, potassium injection effect (WINKLER and SMITH) 1938, 124, 589
- Muscle, creatine and, relation (MYERS and MANGUN) 1936, 114, lxxv
- (MANGUN and MYERS) 1938, 123, lxxix
- Tissue, thyroparathyroidectomy effect (UNDERHILL and JALESKI) 1933, 101, 11
- Urine, determination (STRAUSS) 1937, 118, 331
- , sodium and potassium intake effect (POWER, WILDER, and CUTLER) 1938, 123, xciv

Potassium chloride: Diffusion coefficients (MEHL and SCHMIDT)

1936, 114, lxxvii

Inorganic salts, metabolism, ingestion effect (WILEY, WILEY, and WALLER)

1933, 101, 73

Water metabolism, ingestion effect (WILEY, WILEY, and WALLER)

1933, 101, 73

Potassium iodate: Liver proteins, effect (LUCK)

1938, 123, lxxvii

Potassium salts: Fate, intravenous injection (WINKLER and SMITH)

1938, 123, cxxx

Precipitin: Biological fluids, albumin and globulin determination (GOETTSCH and KENDALL)

1935, 109, 221

Pregnancy: Blood gonadotropic hormone preparation (GUSTUS, MEYER, and WOODS)

1936, 114, 59

— plasma lactose (HUBBARD and BROCK)

1935, 110, 411

— serum colloid osmotic pressure and erythrocyte form (ROTTSCHAEFFER and BETHELL)

1936, 114, lxxxv

— — gonadotropic hormone, chemistry (BISCHOFF)

1938, 125, 697

— —, gonad-stimulating hormone, preparation and purification (CARTLAND and NELSON)

1937, 119, 59

— water, distribution (OBERST and PLASS)

1935, 109, lxxi

Pregnancy—continued:

Copper requirement (KYER and BETHELL)

1936, 114, lx

Corpus luteum vitamin C, relation (BISKIND and GLICK)

1936, 113, 27

Estrin excretion (MARRIAN, COHEN, and WATSON)

1935, 109, lix

Hemoglobin formation, diet influence (KYER and BETHELL)

1936, 114, lx

Iron requirement (KYER and BETHELL)

1936, 114, lx

Mineral acid-base balance (COONS, COONS, and SCHIEFELBUSCH)

1934, 104, 757

Ovary lipid, relation (BOYD)

1935, 108, 607

1935-36, 112, 591

Tissue cholesterol, effect (OKEY, GODFREY, and GILLUM)

1938, 124, 489

— fatty acids, effect (OKEY, GODFREY, and GILLUM)

1938, 124, 489

Urea clearance (NICE)

1935, 109, lxxix

Urine, equilin preparation (CARTLAND and MEYER)

1935-36, 112, 9

—, estrogenic diols (WINTERSTEINER and HIRSCHMANN)

1937, 119, cvii

—, — —, isolation (HIRSCHMANN and WINTERSTEINER)

1937-38, 122, 303

—, gonadotropic hormone (GURIN, BACHMAN, and WILSON)

1938, 123, xlix

Pregnancy—*continued*:

Urine, gonadotropic substances, tungstic acid precipitation, preparation (KATZMAN and DOISY) 1934, 107, 513

—, pituitary-like hormone, anterior, separation (ELDEN) 1933, 101, 1

— pregnanetriol, structure (ODELL and MARRIAN) 1938, 125, 333

See also Gestation

Pregnanediol glucuronide: Sodium, determination, gravimetric (VENNING) 1937, 119, 473

Pregnanetriol: Urine, pregnancy, structure (ODELL and MARRIAN) 1938, 125, 333

Pregnane-3,17,20-triol: Urine, adreno-genital syndrome, isolation (BUTLER and MARRIAN) 1937, 119, 565

Pressor hormone: Pituitary, posterior, electrophoresis (IRVING and DU VIGNEAUD) 1938, 123, 485

Pressor substance: Pituitary gland, posterior, preparation (STEHLE) 1933, 102, 573

Primates: Ketosis (GOLDFARB) 1936, 116, 787

Urine nitrogen partition (RHEINBERGER) 1936, 115, 343

Progesterone: Crystalline, preparation from pig ovaries (ALLEN and GOETSCH) 1936, 116, 653

Excretion product, determination, gravimetric (VENNING) 1937, 119, 473

Progestin: Crystalline (WINTERSTEINER and ALLEN) 1934, 107, 321

Prolactin: Preparation (BATES and RIDDLE) 1938, 123, v

Prolan: Chemistry (BISCHOFF and LONG) 1936, 116, 285

Proline: Insulin, crystalline, isolation (JENSEN and EVANS) 1935, 108, 1

l-, determination, rhodanilic acid (BERGMANN) 1935, 110, 471

Oxidation, tissues (BERNHEIM and BERNHEIM) 1934, 106, 79

Prolinephosphoric acid: *l*-Hydroxy-, synthesis (LEVENE and SCHORMÜLLER) 1934, 106, 595

Propane: 1-Amino-2-hydroxy-, synthesis, new (LEVENE) 1936, 113, 153

Cyclo-, blood, determination (ORCUTT and WATERS) 1937, 117, 509

Propionaldehyde: Reduction, *Clostridium acetobutylicum* (BLANCHARD and MACDONALD) 1935, 110, 145

Propionic acid(s): Amino-, deamination, oxidative, liver and kidney tissues (RODNEY and GARNER) 1938, 125, 209

Bacteria, glucose dissimilation, mechanism (WOOD and WERKMAN) 1934, 105, 63

Disubstituted, nitrophenyl esters, and corresponding free

Propionic acid(s)—*continued*:

acids, rotations (LEVENE, ROTHEN, and MEYER)

1934, 107, 555

Disubstituted, with ethyl group, configurational relationship (LEVENE, ROTHEN, and MEYER)

1936, 115, 401

Glycogen formation, ingestion effect (ECKSTEIN)

1933, 102, 591

Methylbenzyl-, methylbenzyl-acetic acid, configurational relationship (LEVENE and MARKER)

1935, 110, 299

 α -Oximino- β -3-indole-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG)

1934, 104, 675

Reduction, *Clostridium acetobutylicum* (BLANCHARD and MACDONALD)

1935, 110, 145

Propyl acids: Iso-, normal series, configurational relationship (LEVENE and MARKER)

1935, 111, 299

Prostigmine: Muscle choline esterase activity, effect (STADIE and JONES)

1938, 123, cxiv

Myasthenia gravis, effect (STADIE and JONES)

1938, 123, cxiv

Protaminase: Proteinase, influence, determination (WEIL)

1934, 105, 291

Protamine(s): Blood coagulation, effect (CHARGAFF and OLSON)

1937-38, 122, 153 (CHARGAFF)

1938, 125, 671

Protamine(s)—*continued*:

Insulin action, effect (SCOTT and FISHER)

1936, 114, lxxxviii

Salts, phosphatides, lipoproteins, relation (CHARGAFF)

1938, 125, 661

Protease: Lipase action, effect (FALK)

1933, 103, 363

Pepsin, trypsin, and salivary amylase, inactivation (TAUBER and KLEINER)

1934, 105, 411

Protein(s): Abscess nitrogen metabolism, anemic and non-anemic dogs, relation (DAFT, ROBSCHT-ROBBINS, and WHIPPLE)

1937, 121, 45

Acetyl. *See* Acetyl proteins

Acids and bases, gaseous, combination (CZARNETZKY and SCHMIDT)

1934, 105, 301

Amino acids, basic, determination (BLOCK)

1934, 106, 457

— groups, free, allocation (GURIN and CLARKE)

1934, 107, 395

Arginase action (KRAUS-RAGINS)

1938, 123, 761

Arginine determination (GRAFF, MACULLA, and GRAFF)

1937, 121, 71

Aucuba mosaic virus, ultracentrifugal analysis (WYCKOFF)

1938, 124, 585

Azo- (BOYD and HOOKER)

1934, 104, 329

(BOYD and MOVER)

1935, 110, 457

Bacilli, acid-fast, nitrogen partition, biological activity, re-

Protein(s)—continued:

- lation (SEIBERT and MUN-
DAY) 1933, 101, 763
- Bean, black (JONES, GERS-
DORFF, and PHILLIPS)
1937-38, 122, 745
- Bence-Jones (CALVERY and
FREYBERG)
1935, 109, 739, xv
- , blood serum (KYDD)
1934, 107, 747
- Biological value, nitrogen ex-
cretion, endogenous, relation
(FRENCH and MATTILL)
1936, 114, xxxvii
- Blood cells (EISENMAN, MAC-
KENZIE, and PETERS)
1936, 116, 33
- — and plasma, *in vitro*,
distribution (BELLIS and
SCOTT) 1935, 111, 17
- plasma, binding, phenol red
and diodrast, effect (SMITH
and SMITH)
1938, 124, 107
- —, hepatectomy and lapa-
rotomy effect (CHANUTIN,
HORTENSTINE, COLE, and
LUDEWIG) 1938, 123, 247
- —, injection, metabolism
effect (DAFT, ROBSCHT-
ROBBINS, and WHIPPLE)
1938, 123, 87
- —, nephrectomy, effect
(CHANUTIN and LUDEWIG)
1937, 119, xviii
- —, solubility and precipita-
tion, factors affecting (BUT-
LER, BLATT, and SOUTH-
GATE) 1935, 109, 755
- —, specific gravity and, re-
lation (WEECH, REEVES, and
GOETTSCH) 1936, 113, 167

Protein(s)—continued:

- Blood serum (EISENMAN, MAC-
KENZIE, and PETERS)
1936, 116, 33
- —, amino acids, basic
(BLOCK) 1933, 103, 261
- (BLOCK, DARROW, and
CARY) 1934, 104, 347
- (BLOCK) 1934, 105, 455
- —, — —, basic, heat effect
(BLOCK) 1934, 104, 343
- — and edema fluids, con-
centration, comparison (GIL-
LIGAN, VOLK, and ALT-
SCHULE) 1933, 103, 745
- —, blood cholesterol rela-
tion (SCHWARZ and LICHTEN-
BERG) 1937, 121, 315
- —, carbamate-carbon diox-
ide equilibrium, blood car-
bon dioxide transport, rela-
tion (STADIE and O'BRIEN)
1935, 109, lxxxvii
- —, exercise, dehydration
influence (MORSE and
SCHLUTZ) 1936, 114, lxxiv
- — hydrogen ion concentra-
tion determination, colori-
metric, effect (ROBINSON,
PRICE, and CULLEN)
1935, 109, lxxiv
- —, solubility precipitation
patterns (PERLZWEIG, KON-
DRITZER, and BRUCH)
1938, 123, xcii
- —, specific gravity and, re-
lation (WEECH, REEVES, and
GOETTSCH) 1936, 113, 167
- —, various origins, rela-
tionship (BLOCK, DARROW,
and CARY)
1934, 104, 347

Protein(s)—continued:

- Brain, amino acids, age effect
(BLOCK) 1937, 120, 467
- , —, sex differences
(BLOCK) 1938, 123, xiii
- , mammalian, amino acids
(BLOCK) 1937, 119, 765
- , primate, amino acids, sex
differences (BLOCK)
1937, 121, 411
- Capillary permeability (KEYS
and TAYLOR)
1935, 109, 55
- Carbohydrates, determination
(SHEPPARD and EVERETT)
1937, 119, lxxxix
- Carotenoid-, pigment, lobster
egg (STERN and SALOMON)
1937-38, 122, 461
- Catabolism, anemia (DAFT,
ROBSCHUIT-ROBBINS, and
WHIPPLE)
1935, 108, 487
- , hemoglobin, new formed,
relation (DAFT, ROBSCHUIT-
ROBBINS, and WHIPPLE)
1933, 103, 495
- Cells, normal and tumor, swell-
ing, *in vitro*, effect (SHEAR)
1934, 105, lxxix
- Charge, calculation, electro-
kinetic theory (MOYER and
ABELS) 1937, 121, 331
- Cholesterol-, complex, body
fluids, pathological (BRU-
GER) 1935, 108, 463
- Chondroitinsulfuric acid com-
plexes (MEYER, PALMER,
and SMYTH)
1937, 119, 501
- Chromo-, bacteria, photosyn-
thetic (FRENCH)
1938, 123, xxxviii

Protein(s)—continued:

- Cysteine determination (KAS-
SELL and BRAND)
1938, 125, 145
- Cystine determination
(BAERNSTEIN)
1936, 115, 33
(SULLIVAN and HESS)
1937, 117, 423
(KASSELL) 1937, 119, lvi
(GRAFF, MACULLA, and
GRAFF) 1937, 121, 81
- Deaminized, cystine (HESS and
SULLIVAN)
1936, 114, xlix
- Degradation, enzymatic
(BERGMANN and NIEMANN)
1937, 118, 781
- Denaturation and hydration
(NEURATH and BULL)
1936, 115, 519
(BULL and NEURATH)
1937, 118, 163
- , nitrogen effect (HENDRIX
and DENNIS)
1938, 123, liii
- , sound waves, effect (CHAM-
BERS and FLOSDORF)
1936, 114, 75
- Dietary, *l*- and *dl*-cystine me-
tabolism, growth effect
(STEKOL) 1934, 107, 641
- , (edestin), salt-poor diet,
effect (SWANSON, TIMSON,
and FRAZIER)
1935, 109, 729
- essential in (ROSE)
1934, 105, lxxiii
- — —, isolation (ROSE, Mc-
COY, MEYER, CARTER, WO-
MACK, and MERTZ)
1935, 109, lxxvii

Protein(s)—continued:

- Dietary, *l*- and *dl*-methionine metabolism (STEKOL)
1935, 109, 147
- Digestibility *in vitro* (JONES and GERSDORFF)
1933, 101, 657
1934, 106, 707
1937, 114, liii
- Disulfide groups, reduction, immunological effect (BLUMENTHAL)
1936, 113, 433
- Ectoderm, nature (BLOCK)
1937, 121, 761
- Edema fluids and blood serum, concentration, comparison (GILLIGAN, VOLK, and ALT-SCHULE) 1933, 103, 745
- Egg (BLOCK)
1934, 105, 455
- , diet of hen, effect (CALVERY and TITUS)
1934, 105, 683
- white, separation and characterization (YOUNG)
1937, 120, 1
- Electric mobility and titration curves, molecular radius and weight calculation, relation (MOYER and ABRAMSON)
1938, 123, 391
- Films, reactions (CLOWES, DAVIS, and KRAHL)
1938, 123, xxii
- Free diet, allantoin and uric acid excretion (MARTIN and CORLEY) 1934, 105, lvii
- —, anemia, metabolism effect (DAFT, ROBSCHT-ROBBINS, and WHIPPLE)
1933, 103, 495

Protein(s)—continued:

- Free diet, *l*- and *dl*-cystine metabolism (STEKOL)
1934, 107, 225
- Galactose cataract-producing action, effect (MITCHELL and COOK) 1938, 123, lxxxvi
- Gastric juice (MARTIN)
1933, 102, 113
- —, urea-splitting enzyme, relation (MARTIN)
1933, 102, 131
- Glycine determination (PATTON) 1935, 108, 267
- Growth essential, properties (CALDWELL and ROSE)
1934, 107, 57
- Hemoglobin building, relation (PEARSON, ELVEHJEM, and HART) 1937, 119, 749
- Hormones, resorption, delayed, influence (BISCHOFF and MAXWELL)
1936, 114, xi
- Hydrolysates, toxic, selenium removal (PAINTER and FRANKE) 1935, 111, 643
- , tyrosine microdetermination (BERNHART)
1938, 123, x
- Hydrolysis, methods (SULLIVAN and HESS)
1937, 117, 423
- Hydrolyzed histamine-like substance, separation (MCMEEKIN) 1935, 109, lxiv
- Intake, growth and calcification, effect (CONNER and SHERMAN)
1936, 115, 695
- Lipo-, protamine salts, phosphatides, relation (CHARGAFF) 1938, 125, 661

Protein(s)—continued:

Liver, crystallizable (DOUNCE and SUMNER)

1938, 124, 415

—, extractability, hydrogen ion concentration, effect (LUCK and NIMMO)

1937, 119, lxxv

—, fasting effect (ADDIS, POO, and LEW)

1936, 115, 117

—, heat and alcohol, effect (SEEGERS and MATTILL)

1935, 110, 531

—, potassium iodate effect (LUCK)

1938, 123, lxxvii

—, storage (LUCK)

1936, 115, 491

—, water storage relation (KAPLAN and CHAIKOFF)

1936, 116, 663

—Low diet, blood serum lipids, effect (PAGE, FARR, and WEECH)

1937, 121, 111

Mammary gland (JACKSON and GORTNER)

1938, 123, 719

Metabolism, anterior pituitary growth hormone, effect (SCHAFER and LEE)

1935, 108, 355

—, — — — preparation, effect (GAEBLER and PRICE)

1937, 121, 497

—, glycine synthesis, influence (GRIFFITH)

1934, 105, xxxiii

—, phlorhizinized dogs (HOWLAND and HAWKINS)

1938, 123, 99

Methionine determination (BAERNSTEIN)

1934, 106, 451

1936, 114, v

1936, 115, 25, 33

Protein(s)—continued:

(KASELL)

1937, 119, lvi

(KASELL and BRAND)

1938, 125, 145

Monolayers (HARKINS and ANDERSON)

1938, 125, 369

Mosaic virus, latent, isolation (LORING and WYCKOFF)

1937, 121, 225

Muscle, smooth (MEHL)

1938, 123, lxxxiii

Myxedema-relieving, artificial, from diiodotyrosine peptone (SALTER and PEARSON)

1935-36, 112, 579

Neuro-, amino acids (BLOCK)

1937, 119, xi

1937, 120, 467

1937, 121, 411, 761

Neurofibrils, amino acids (BLOCK)

1937, 119, xi

Nitrogen, denaturation effect (HENDRIX and DENNIS)

1938, 123, liii

Nucleo-. See Nucleoproteins

Optical rotation, hydrogen ion concentration effect (ALMQUIST and GREENBERG)

1934, 105, 519

Organs, determination, gravimetric (ADDIS, POO, LEW, and YUEN)

1936, 113, 497

—, fasting effect (ADDIS, POO, and LEW)

1936, 115, 111

—, formation rate, casein re-feeding effect (ADDIS, POO, and LEW)

1936, 116, 343

—, thyroidectomy, thyroxine and dinitrophenol administration effect (ADDIS, KARNOFSKY, LEW, and POO)

1938, 124, 33

Protein(s)—*continued*:

- Osmotic pressure, molecular weight, and stability (BURK) 1937, 120, 63
- Papilloma virus, hydrogen ion concentration stability (BEARD and WYCKOFF) 1938, 123, 461
- Peanut, nutritive value (BAERNSTEIN) 1937-38, 122, 781
- Phenylalanine, spectroscopic identification (ROSS) 1934, 104, 531
- Physical chemistry (COHN, ED-SALL, and BLANCHARD) 1934, 105, 319
1935, 109, 631
- Precipitants, sulfites as (CAMP-BELL and HANNA) 1937, 119, 9
- Pyrrole formation from (GUEST and McFARLANE) 1938, 123, xlvii
- Respiratory, physical constants (SVEDBERG) 1933, 103, 311
- Saliva, parotid, human (BRAM-KAMP) 1936, 114, 369
- Salmon egg casing (YOUNG and INMAN) 1938, 123, cxxxi
1938, 124, 189
- Silk, chemical and immuno-logical properties (FELL) 1935, 109, xxxi
- Sols, calcium, non-diffusible (EVERSOLE, FORD, and THOMAS) 1934, 104, 107
(GREENBERG) 1934, 105, 511
(EVERSOLE) 1934, 105, 515
- Solubility (STEINHARDT) 1938, 123, cxv

Protein(s)—*continued*:

- Solutions, equilibrium, hetero-geneous (JOSEPH) 1936, 116, 353
- , refractivity (HAND) 1935, 108, 703
- Structure (BERGMANN and NIEMANN) 1936, 115, 77
1937, 118, 301
- Sulfanilic acid, diazotized, and, reaction (EAGLE and VICK-ERS) 1936, 114, 193
- Sulfate determination (KAS-SELL and BRAND) 1938, 125, 145
- Sulfhydryl groups (GREEN-STEIN) 1938, 125, 501
- Sulfur (BLUMENTHAL and CLARKE) 1935, 110, 343
- , determination (BAERN-STEIN) 1936, 115, 33
- distribution (BAERNSTEIN) 1934, 105, vi
- , labile (ZAHND and CLARKE) 1933, 102, 171
- , total, determination (PAINTER and FRANKE) 1936, 114, 235
- Synthesis, enzymatic, intra-cellular (BERGMANN and FRAENKEL-CONRAT) 1937, 119, 707
- Systems, thalious chloride ac-tivity coefficient (STONE and FAILEY) 1934, 105, lxxxvi
- Thyroid, peptic digest, thy-roxine (FOSTER, PALMER, and LELAND) 1936, 115, 467
- Timothy-grass bacillus (MEN-ZEL and HEIDELBERGER) 1938, 124, 301

Protein(s)—continued:

Tissue, basic amino acid an-
lage (BLOCK)

1934, 105, 663

—, composition (GRAFF and
MACULLA) 1935, 110, 71
(GRAFF and GRAFF)

1937, 121, 79

—, dietary cystine, effect (LEE
and LEWIS)

1934, 107, 649

—, fasting and refeeding, effect
(LEE and LEWIS)

1934, 107, 649

—, — effect (ADDIS, POO, and
LEW) 1936, 115, 111

—, formation rate, casein re-
feeding effect (ADDIS, POO,
and LEW) 1936, 116, 343

—, thyroidectomy, thyroxine
and dinitrophenol adminis-
tration effect (ADDIS, KAR-
NOFSKY, LEW, and POO)

1938, 124, 33

Tobacco mosaic, crystalline,
aucuba mosaic virus, rela-
tion (STANLEY)

1937, 117, 325

— —, —, x-ray diffraction
patterns (WYCKOFF and
COREY) 1936, 116, 51

— — virus, activity and yield
(STANLEY)

1937, 121, 205

— — —, —, determination
(LORING) 1937, 121, 637

— — —, —, factors influencing
(STANLEY)

1937, 117, 755

— — —, crystalline, absorp-
tion spectrum, ultraviolet
(LAVIN and STANLEY)

1937, 118, 269

Protein(s)—continued:

Tobacco mosaic virus, crystal-
line, isolation from tomato
plants (LORING and STAN-
LEY) 1937, 117, 733

— — —, —, preparation
(STANLEY)

1936, 115, 673

— — —, hydrogen ion concen-
tration stability (WYCKOFF)
1937-38, 122, 239

— — —, molecular sedimenta-
tion constants (WYCKOFF)
1937, 121, 219

— — —, nucleic acid (LORING)
1938, 123, lxxvi

Total, blood plasma and serum
(LEHMAN and SCOTT)

1935, 111, 43

—, body, determination, gravi-
metric (ADDIS, POO, LEW,
and YUEN)

1936, 113, 497

—, — fluids, pathological, cho-
lesterol, relation (BRUGER)

1934, 105, xiii

Toxic, diphtheria bacillus fil-
trates (PAPPENHEIMER)

1937, 120, 543

Transudate, specific gravity
and, relation (WEECH,
REEVES, and GOETTSCHE)

1936, 113, 167

Tryptic-ereptic digestion,
study technique (SURE, KIK,
and BUCHANAN)

1935, 108, 11

Tubercle bacillus, bovine and
avian (MENZEL and HEIDEL-
BERGER) 1938, 124, 301

— —, human (HEIDELBERGER
and MENZEL)

1934, 104, 655

Protein(s)—continued:

Tubercle : bacillus, human,
Strain H-37 (MENZEL and
HEIDELBERGER)

1938, 124, 89

Tuberculin, acid-base-com-
bining capacity (SEIBERT)

1936, 114, lxxxix

Urine, dielectric constant dis-
persion (FRIEND, FERRY, and
ONCLEY) 1938, 123, xxxix

Virus, crystalline, ultracentrif-
ugal analysis (WYCKOFF,
BISCOE, and STANLEY)

1937, 117, 57

—, stream double refraction
(LAUFFER and STANLEY)

1938, 123, 507

Vitamin B-sparing action, fat
and, influence (EVANS, LEP-
KOVSKY, and MURPHY)

1934, 107, 429

Yeast (CSONKA)

1934, 105, xix

1935, 109, 703

— invertase activity, influence
(SAUL and NELSON)

1935, 111, 95

Proteinase: Inflammatory exu-
dates, pleural, activity
(WEISS, KAPLAN, and LAR-
SON) 1938, 125, 247

Pancreatic, egg albumin, crys-
talline, hydrolysis (CAL-
VERY) 1933, 102, 73

Preparation (WEIL)

1934, 105, 291

Proteolysis: Blood serum, uremia
(MASON and EVERS)

1937, 119, 735

Enzyme, artificial, hematopor-
phyrin (BOYD)

1933, 103, 249

Proteolysis—continued:

Enzyme, fig tree latex (ROB-
BINS and LAMSON)

1934, 106, 725

Enzymes (BERGMANN, ZERVAS,
FRUTON, SCHNEIDER, and
SCHLEICH)

1935, 109, 325

(BERGMANN, ZERVAS, and
FRUTON) 1935, 111, 225

(BERGMANN, ZERVAS, and
ROSS) 1935, 111, 245

(BERGMANN and ZERVAS)
1936, 114, 711

(BERGMANN and ROSS)
1936, 114, 717

(BERGMANN, ZERVAS, and
FRUTON) 1936, 115, 593

(BERGMANN and FRUTON)
1937, 117, 189

1937, 118, 405
(BERGMANN and NIEMANN)

1937, 118, 781

—, bacteria (BERGER, JOHN-
SON, and PETERSON)

1938, 124, 395

—, intracellular, nature (BERG-
MANN, FRUTON, and
FRAENKEL-CONRAT)

1937, 119, 35

—, molds (BERGER, JOHNSON,
and PETERSON)

1937, 117, 429

—, peptides in heavy water,
action (FOSTER, KESTON,
RITTENBERG, and SCHOEN-
HEIMER) 1938, 124, 159

—, synthetic substrates, action
(GREENSTEIN)

1935-36, 112, 517

Systems, papain (BERGMANN
and ROSS)

1935, 111, 659

- Prothrombin:** Determination (QUICK and LEU) 1937, 119, lxxxi
Hemophilia (QUICK) 1935, 109, lxxiii
Jaundice, obstructive (QUICK) 1935, 109, lxxiii
Purification (SEEGERS, SMITH, WARNER, and BRINKHOUS) 1938, 123, 751
Species differences (QUICK) 1938, 123, xcix
- Provitamin:** D, cholesterol (WADDELL) 1934, 105, 711
—, ergosterol, crude (BILLS, MASSENGALE, McDONALD, and WIRICK) 1935, 108, 323
—, heat-treated cholesterol (HATHAWAY and LOBB) 1936, 113, 105
—, plant and animal (BETHKE, RECORD, and WILDER) 1935-36, 112, 231
—, potency and properties, heat-treated cholesterol (HATHAWAY and KOCH) 1935, 108, 773
—, sterol derivatives, potency (KOCH and KOCH) 1936, 116, 757
- Prunus avium:** See Cherry
- Pseudoglobulin:** Carbohydrate, nature (COGHILL and CREIGHTON) 1938, 123, xxiii
- Pseudokeratins:** Ectoderm (BLOCK) 1937, 121, 761
- Pseudomonas aeruginosa:** See *Bacillus pyocyaneus*
- Psyllium:** Seed, mucilage (ANDERSON and FIREMAN) 1935, 109, 437
- Puppy:** New born, blood serum phosphatase (BODANSKY) 1934, 104, 717
- Rat and chick antidermatitis factors, deficiency effect** (FOOTS, LEPKOVSKY, HELMER, and JUKES) 1937, 119, xxxiv
- Purine(s):** Creatine-creatinine metabolism, effect (BEARD and PIZZOLATO) 1938, 123, vii
—Free diet, allantoin and uric acid excretion (MARTIN and CORLEY) 1934, 105, lvii
Metabolism (ALLEN and CERECEDO) 1933, 102, 313 (CERECEDO and ALLEN) 1934, 107, 421
—, epinephrine influence (CHAIKOFF, LARSON, and READ) 1935, 109, 395
—, insulin and adrenal medulla, relation (LARSON and BREWER) 1936, 115, 279
—, — effect, Dalmatian coach-dog (CHAIKOFF and LARSON) 1935, 109, 85
- Methylated, creatine-creatinine metabolism, effect** (BEARD and PIZZOLATO) 1938, 123, vii
- Nucleotides, catabolism, blood glycolysis relation** (EILER and ALLEN) 1938, 123, 655
- Tissue, determination** (GRAFF and MACULLA) 1935, 110, 71
- Pyocyanine:** Cerebral cortex metabolism, effect (YOUNG) 1937, 120, 659

Pyocyanine—continued:

Isomer, oxidation-reduction potentials (PREISLER and HEMPELMAN)

1936, 114, lxxxi

Pyranoside: Acetone-methyl-rhamno-, chemical constitution and properties (LEVENE and MUSKAT)

1934, 105, 431

Pyridine: Derivatives, anti-black tongue, effect (WOOLLEY, STRONG, MADDEN, and ELVEHJEM)

1938, 124, 715

—, black tongue, effect (WOOLLEY, STRONG, and MADDEN)

1938, 123, cxxxii

—, nutrition value (FUNK and FUNK)

1937, 119, xxxv

Hemoglobin globin displacement (WILLIAMS and MORRISON)

1937, 119, cv

-Like substances, urine, determination (VILTER, SPIES, and MATHEWS)

1938, 125, 85

Sugars, action (LEVENE and HILL)

1933, 102, 563

Pyridine hemochromogen: Carbon monoxide absorption (CLIFCORN, MELOCHE, and ELVEHJEM)

1935, 111, 399

Pyrimidine(s): 2,4-Diethoxy-, acetobromo-*d*-ribose and, interaction (HILBERT and RIST)

1937, 117, 371

Metabolism, growth (SILVER and CERECEDO)

1936, 114, xciii

Pyroglutamic acid: *dl*-, fate (BUTTS, BLUNDEN, and

DUNN) 1937, 119, 247

(BUTTS, DUNN, and BLUNDEN) 1937, 119, xv

Pyrrole: Proteins, formation (GUEST and MCFARLANE)

1938, 123, xlvii

Pyrrolidonecarboxylic acid: Glutamic acid-, system (WILSON and CANNAN)

1937, 119, 309

Pyrus communis: *See* Pear

Pyruvate: Blood, exercise effect (JOHNSON and EDWARDS)

1937, 118, 427

1937, 119, liv

Lactate-enzyme-, system, oxidation-reduction potentials (BARRON and HASTINGS)

1934, 107, 567

Lactate oxidation to, erythrocytes and methylene blue effect (WENDEL)

1933, 102, 373

Urine, exercise effect (JOHNSON and EDWARDS)

1937, 118, 427

1937, 119, liv

Pyruvic acid: Cystine and cysteine determination, effect (SULLIVAN and HESS)

1937-38, 122, 11

Determination (WENDEL)

1933, 102, 47

Ergot alkaloid, precursor (JACOBS and CRAIG)

1937-38, 122, 419

Metabolism (FLOCK, BOLLMAN, and MANN)

1938, 123, xxxvi

Pyruvic acid—continued:

Metabolism, vitamin B₁ deficiency and inanition (LIPSCHITZ, POTTER, and ELVEHJEM) 1938, 123, 267

Oxidation (MEYER) 1933, 103, 39

— and dismutation (BARRON and LYMAN) 1938, 123, iv

—, gonococci effect (BARRON) 1936, 113, 695

Utilization (FLOCK, BOLLMAN, and MANN) 1938, 125, 49

Yeast utilization (SMYTHE) 1938, 123, cxi

1938, 125, 635

Q

Quinhydrone: Electrode, micro- (PIERCE) 1937, 117, 651

—, —, aqueous humor hydrogen ion concentration determination, rachitic and normal rats (PIERCE)

1935, 111, 501

—, —, urine, glomerulus, hydrogen ion concentration determination (PIERCE and MONTGOMERY)

1935, 110, 763

Quinones: Semi-, anthraquinone sulfonate (HILL and SHAFFER) 1936, 114, li

—, lactoflavin (MICHAELIS and SCHWARZENBACH)

1938, 123, lxxxiv

R

Racemase: *Clostridium butylicum* (CHRISTENSEN, PETERSON, and JOHNSON)

1938, 123, xxi

Ration: Wool, lamb, effect (SULLIVAN, HESS, HARDY, and HOWE) 1935, 109, xc

See also Diet, Feedingstuff, Food, Nutrition

Ray(s): α , egg albumin solutions, irradiation effect (ARNOW)

1935, 110, 43

See also Cathode ray, Roentgen ray, Ultraviolet light, Ultraviolet radiation

Reaction velocity: Biochemical reactions (BODANSKY)

1937, 120, 555

Reducing substances: Aqueous humor, frog and higher animals (WALKER)

1933, 101, 269

Bee-moth, metamorphosis effect (CRESCITELLI and TAYLOR) 1935, 108, 349

Blood, frog and higher animals (WALKER)

1933, 101, 269

Cerebrospinal fluid, frog and higher animals (WALKER)

1933, 101, 269

Fermentable zinc-precipitable, blood, diabetic coma (REINHOLD and LETONOFF)

1936, 114, lxxxiii

Fluorosis (PHILLIPS, STARE, and ELVEHJEM)

1934, 106, 41

Lymph, frog and higher animals (WALKER)

1933, 101, 269

Non-sugar, plant juices (SCHLENKER)

1937, 117, 727

Scurvy (PHILLIPS, STARE, and ELVEHJEM)

1934, 106, 41

Reducing substances—continued:

- Urine, glomerulus, frog and
Necturus (WALKER and REI-
 SINGER) 1933, 101, 223
 —, normal (LAUG and NASH)
 1935, 108, 479

Refecation: Fat rôle (WHIPPLE and CHURCH)

1935, 109, xcvi

Refeeding: Tissue proteins, effect (LEE and LEWIS)

1934, 107, 649

Rehberg burette: Modified, (LONGWELL and HILL)

1935-36, 112, 319

Renal: See Kidney**Rennin: Chemical nature** (TAUBER and KLEINER)

1934, 104, 259

Zymogens (KLEINER and TAUBER)

1934, 106, 501

Reproduction: Fat-free diet, effect (EVANS, LEPKOVSKY, and MURPHY)

1934, 106, 431

Fatty acids, saturated, as energy source (EVANS, LEPKOVSKY, and MURPHY)

1934, 106, 441

Theelin and theelol effect (WADE)

1934, 105, xcvi

Reproductive system: Embryo, sex hormones, effect (WILLIER, GALLAGHER, and KOCH)

1935, 109, xcix

Resins: Slash-pine growing tips (HALL and GISVOLD)

1936, 113, 487

Respiration: (See note on p. 221)**Apparatus, stack, constant volume** (BENEDICT)

1936, 116, 307

Respiration—continued:**Chamber, air analysis** (CARPENTER)

1933, 101, 595

Depressants, oxidative, action (CLOWES and KRAHL)

1935, 109, xxi

Stimulants, oxidative, action (CLOWES and KRAHL)

1935, 109, xxi

Trials, gas analysis (KLEIBER)

1933, 101, 583

Respiratory exchange: Apparatus, automatic, small animals (LEWIS and LUCK)

1933, 103, 209

Carbohydrate ingestion, high (TALBOTT)

1935, 109, xci

Respiratory pigments: Oxygen and, equilibrium (ADAMS)

1937, 119, iii

Respiratory quotient: Galactose ingestion effect, normal and depancreatized dogs (ROE, GILMAN, and COWGILL)

1934, 105, lxxii

Phospholipid ingestion effect (REISER and HANES)

1938, 123, ci

Vitamin B₁, effect (WHIPPLE and CHURCH)

1937, 119, ciii

Reticulocyte(s): Blood, inorganic salt-deficient diet, effect (ORTEN and SMITH)

1934, 105, 181

Copper effect, anemia (SCHULTZE and ELVEHJEM)

1933, 102, 357

Hematopoiesis index (ORTEN)

1938, 123, lxxxix

Iron effect, anemia (SCHULTZE and ELVEHJEM)

1933, 102, 357

- Retina:** Carotenoids, chicken (WALD and ZUSSMAN) 1937-38, 122, 449
- Rhamnofuranoside:** Theophylline-5-methyl-, synthesis (LEVENE and MUSKAT) 1934, 106, 761
- Theophylline-5-methyl-*l*- (LEVENE and COMPTON) 1936, 114, 9
- Rhamnose:** *l*-, absorption rate (SILBERMAN and LEWIS) 1933, 101, 741
- , glycogen formation, ingestion effect (SILBERMAN and LEWIS) 1933, 101, 741
- , 5-tosyl monoacetone, *d*-allomethylose synthesis, hydrolysis relation (LEVENE and COMPTON) 1936, 116, 169
- Rheum hybridum:** *See* Rhubarb
- Rhizopus suinus:** Plant growth hormone produced by (THIMANN) 1935, 109, 279
- Rhodanic acid:** *l*-Proline determination (BERGMANN) 1935, 110, 471
- Rhubarb:** Leaf, amides, metabolism (VICKERY, PUCHER, LEAVENWORTH, and WAKEMAN) 1938, 125, 527
- , organic acids (PUCHER, CLARK, and VICKERY) 1937, 117, 605
- Malic acid (PUCHER, CLARK, and VICKERY) 1937, 117, 599
- Ribitol-5-phosphoric acid:** *d*-, (LEVENE, HARRIS, and STILLER) 1934, 105, 153
- Riboflavin:** Body fat, effect (MCHENRY and GAVIN) 1938, 125, 653
- Growth requirement (DAY and DARBY) 1938, 123, xxviii
- Lactic acid bacteria, growth effect (SNELL and STRONG) 1938, 123, cxii
- See also* Vitamin B₂
- Ribose:** Acetobromo-*d*-, 2,4-diethoxypyrimidine and, interaction (HILBERT and RIST) 1937, 117, 371
- d*-, acetone derivatives (LEVENE and STILLER) 1933, 102, 187
- , crystalline, preparation (LEVENE) 1935, 108, 419
- l*-, β -*l*-altrose preparation, cyanohydrin reaction (AUSTIN and HUMOLLER) 1934, 105, v
- Nucleotides, synthesis (LEVENE and TIPSON) 1934, 106, 113
- , 1935, 111, 313
- Ribosephosphoric acid:** Yeast adenylic acid, formation (LEVENE and HARRIS) 1933, 101, 419
- Ribose-5-phosphoric acid:** Synthesis (LEVENE and STILLER) 1934, 104, 299
- Ribosidouracil:** 1-*d*-, synthesis (HILBERT and RIST) 1937, 117, 371
- Ribulose:** Preparation (LEVENE and TIPSON) 1936, 115, 731
- Rice:** Polish concentrate, body fat, effect (MCHENRY and GAVIN) 1938, 125, 653

Rice—continued:

Polishings, vitamin B complex, fractionation (BOOHER and LOJKIN) 1938, 123, xiv

Rickets: Antirachitic activation, milk constituents (ANSBACHER and SUPPLEE) 1934, 105, 391

— activity, ergosteryl sulfate salts, irradiated aqueous solutions (NATELSON, SOBEL, and KRAMER) 1934, 105, 761

— effectiveness, vitamin D, various sources (HAMAN and STEENBOCK) 1936, 114, 505

— efficacy, cholesterol, irradiated (WADDELL) 1934, 105, 711

— factor, cod liver oil and irradiated ergosterol, distribution, chicken (RUSSELL, TAYLOR, and WILCOX) 1934, 105, lxxiv

— — — oil and irradiated ergosterol, tissue distribution, chicken (RUSSELL, TAYLOR, and WILCOX) 1934, 107, 735

— property, casein (HARRIS and BUNKER) 1937, 119, xlv

Aqueous humor hydrogen ion concentration determination, microquinhydrone electrode (PIERCE) 1935, 111, 501

Beryllium, "local factor" and viosterol, rôle (SOBEL, GOLDFARB, and KRAMER) 1935, 108, 395

Rickets—continued:

Bone growth (RUSSELL, TAYLOR, and DUNCAN) 1937, 119, lxxxv

Brain phosphorus (KERR) 1937-38, 122, 53

Calcification, salt solutions, effect (GERSTENBERGER) 1938, 123, xli

Calcium-low diet, production (SHOHL) 1935, 109, lxxxv

Cartilage calcification, phosphate and parathyroid extract effect (MCLEAN and MCCOY) 1936, 114, lxxv

Epiphyseal cartilage reaction (PIERCE) 1938, 124, 115

Parathyroidectomy effect (JONES) 1934, 106, 701

Tissue, lipase (FALK and MCGUIRE) 1935, 108, 61

Ultraviolet radiation, wavelength effect (KNUDSON and BENFORD) 1934, 105, xlviii

1938, 124, 287

Roentgen ray: Glutathione effect (KINSEY) 1935, 110, 551

Roots: Carotene, properties (MACKINNEY) 1935, 108, 45

Fat and sterol metabolism (MACLACHLAN) 1936, 114, 185

S

Sable-fish viscera oil: Vitamins A and D (PUGSLEY) 1938, 123, xcvi

Saccharase: Determination (SUMNER and HOWELL) 1935, 108, 51

- Saccharoid(s):** Blood, diet and drugs, relation (SMELO, KERN, and DRABKIN) 1938, 125, 461
- Determination (SMELO, KERN, and DRABKIN) 1938, 125, 461
- Saccharomyces cerevisiae:** *See* Yeast
- Salicylic acid:** Glycine conjugation, uric acid excretion, effect (QUICK) 1933, 101, 475
- Saliva:** Acid-neutralizing power (SOYENKOFF and HINCK) 1935, 109, 467
- Amylase inactivation, protease (TAUBER and KLEINER) 1934, 105, 411
- Diastase (COHN and BROOKES) 1936, 114, 139
- Ethyl alcohol determination (FRIEDEMANN) 1934, 105, xxviii (FRIEDEMANN and BROOK) 1936, 114, xxxvii
- Hydrogen ion concentration determination (SOYENKOFF and HINCK) 1935, 109, 467
- Mixed, inorganic constituents (BAXTER) 1933, 102, 203
- Parotid, human, protein (BRAMKAMP) 1936, 114, 369
- , inorganic constituents (BAXTER) 1933, 102, 203
- Salmine:** Fatty acids, combination (JUKES and SCHMIDT) 1935, 110, 9
- Salmon:** Egg casing, protein (YOUNG and INMAN) 1938, 123, cxxxii 1938, 124, 189
- Salmon oil:** Blood and milk, lactation, effect (McCAY and MAYNARD) 1935, 109, 29
- Salt(s):** Blood and muscle, exchange (HASTINGS and EICHELBERGER) 1935, 109, xli (EICHELBERGER) 1937-38, 122, 323
- — —, body water effect (HASTINGS and EICHELBERGER) 1937, 117, 73
- — —, dehydration effect (EICHELBERGER and HASTINGS) 1937, 118, 205
- — —, hydronephrosis effect (EICHELBERGER) 1937, 119, xxx
- — —, respiratory alkalosis and acidosis, effect (EICHELBERGER and HASTINGS) 1937, 118, 197
- Calcification, rickets, effect (GERSTENBERGER) 1938, 123, xli
- Diet poor in, body composition, effect (LIGHT, SMITH, SMITH, and ANDERSON) 1934, 107, 689
- — —, edestin as sole protein, effect (SWANSON, TIMSON, and FRAZIER) 1935, 109, 729
- Gelatin and, activity coefficients and membrane equilibrium (JOSEPH) 1936, 116, 353

Salt(s)—continued:

- Hemoglobin-oxygen equilibrium, effect (SIDWELL, MUNCH, BARRON, and HOGNESS) 1938, 123, 335
- Inorganic. *See* Inorganic salts
- Low ration, blood cell and blood pigment, realimentation effect (ORTEN and SMITH) 1934, 105, lxvi
- Solutions, isotonic, blood and muscle salt and water exchange, intravenous injection effect (HASTINGS and EICHELBERGER) 1937, 117, 73
- Stratum corneum ζ -potential, effect (WILKERSON) 1938, 123, cxxviii
- Sapogenin(s):** Desoxysarsa- (SIMPSON and JACOBS) 1935, 110, 565
- Digitalis (JACOBS and SIMPSON) 1935, 110, 429
- Polygala senega* (JACOBS and ISLER) 1937, 119, 155
- Sarsa- (JACOBS and SIMPSON) 1934, 105, 501 (SIMPSON and JACOBS) 1935, 109, 573
- , degradations (SIMPSON and JACOBS) 1935, 110, 565
- Saponin:** Soy bean (BURRELL and WALTER) 1935, 108, 55
- Sarcosine:** Raman spectrum (EDSALL) 1938, 123, xxxiii
- Sarsasapogenin:** (JACOBS and SIMPSON) 1934, 105, 501 (SIMPSON and JACOBS) 1935, 109, 573

Sarsasapogenin—continued:

- Degradations (SIMPSON and JACOBS) 1935, 110, 565
- Scallop:** Muscle, nitrogenous extractives (MOORE and WILSON) 1937, 119, 585
- , octopine (MOORE and WILSON) 1937, 119, 573
- Schizophrenia:** Blood gases, hydrogen ion concentration, lactic acid and, exercise effect (LOONEY) 1938, 123, lxxvi
- lactic acid and glutathione (LOONEY and CHILDS) 1934, 105, liii
- Sciurus niger:** *See* Fox-squirrel
- Scurvy:** Kidney and liver respiration (STOTZ, HARRER, SCHULTZE, and KING) 1937, 120, 129
- Tissue respiration and reducing substances (PHILLIPS, STARE, and ELVEHJEM) 1934, 106, 41
- Selenium:** Protein hydrolysates, toxic, removal (PAINTER and FRANKE) 1935, 111, 643
- Semimercaptals:** Amino compounds, reactions (SCHUBERT) 1937, 121, 539
- Seminal fluid:** Uterus-contracting substance (COCKRILL, MILLER, and KURZROK) 1934, 105, xvi
- Semiquinone(s):** Anthraquinone sulfonates (HILL and SHAFFER) 1936, 114, li
- Lactoflavin (MICHAELIS and SCHWARZENBACH) 1938, 123, lxxxiv

Senega-root: Sapogenins (JACOBS and ISLER)

1937, 119, 155

Serine: *dl*-, metabolism (BUTTS, BLUNDEN, and DUNN)

1938, 124, 709

Growth relation (McCoy and ROSE) 1937, 117, 581

Metabolism, cystinuria (BRAND and CAHILL)

1935, 109, 545

Synthesis (DUNN, REDEMANN, and SMITH)

1934, 104, 511

(SCHILTZ and CARTER)

1936, 116, 793

Serinephosphoric acid: *dl*-, resolution (LEVENE and SCHORMÜLLER)

1934, 106, 595

—, synthesis (LEVENE and SCHORMÜLLER)

1934, 105, 547

Vitellinic acid hydrolysis, formation (LEVENE and SCHORMÜLLER)

1933, 103, 537

Sex: Blood lipids, effect (LORENZ, ENTENMAN, and CHAIKOFF)

1937-38, 122, 619

Brain, primate, proteins, amino acids, differences (BLOCK)

1937, 121, 411

— protein, amino acids, effect (BLOCK) 1938, 123, xiii

Carbohydrate metabolism, effect (DEUEL, GULICK, GRUNEWALD, and CUTLER)

1934, 104, 519

(GULICK, SAMUELS, and DEUEL) 1934, 105, 29

(GRUNEWALD, CUTLER, and DEUEL) 1934, 105, 35

(BUTTS, CUTLER, and DEUEL) 1934, 105, 45

Sex—continued:

(DEUEL, HALLMAN, MURRAY, and SAMUELS)

1937, 119, 607

Hormone, male, genital tract, effect (HARROW and NAIMAN)

1934, 105, xxxv

—, —, ketone body excretion, administration effect (CHAMBERLIN, FURGASON, and HALL)

1937, 121, 599

—, —, preparation, comb growth reaction (GALLAGHER and KOCH)

1936, 114, xxxix

—, —, urine, bulls and rams (BUTZ and HALL)

1937, 119, xvi

Hormones, chick comb response (DORFMAN and GREULICH)

1937, 119, xxv

—, female, urine, properties (BOWMAN, VISSCHER, and MULL)

1935, 109, xi

—, reproductive system, embryo, effect (WILLIER, GALLAGHER, and KOCH)

1935, 109, xcix

— *See also* Androstenedione, Dihydroequilenin, Equilenin, Equilin, Estradiol, Estrin, Estriol, Estrone, Isoandrosterone, Progesterone, Progestin, Theelin, Theelol

Iron storage, influence (STEENBOCK, SEMB, and VAN DONK)

1936, 114, ci

Ketone body excretion, effect (CHAMBERLIN, FURGASON, and HALL)

1937, 121, 599

Sex—*continued*:

Liver glycogen, effect (DEUEL,
BUTTS, HALLMAN, MURRAY,
and BLUNDEN)

1937, 119, 617

— lipids, effect (OKEY, GILLUM,
and YOKELA)

1934, 107, 207

Shaffer-Somogyi: Copper reagent
(HARDING and DOWNS)

1933, 101, 487

Shark liver oil: Blood and milk,
lactation, effect (McCAY and
MAYNARD)

1935, 109, 29

Shock: Peptone, coagulation de-
fect (QUICK)

1936, 114, lxxxii

Silicon: Microdetermination
(DEEDS and EDDY)

1936, 114, 667

Silk: Fibroin, hydrolysis products
(GRANT and LEWIS)

1935, 108, 667

—, structure (BERGMANN and
NIEMANN)

1937-38, 122, 577

Hydrolysis products (LEWIS
and GRANT)

1934, 105, lii

Proteins, chemical and im-
munological properties
(FELL)

1935, 109, xxxi

Silkworm: Cuticulin, isolation
and analysis (BERGMANN)

1938, 123, ix

Feces, sterols (BERGMANN)

1937, 117, 175

Silver oxide: Amino acid oxida-
tion (HERBST and CLARKE)

1934, 104, 769

Sinigrin: Preparation (MORELL
and LINK)

1936, 114, 123

Sitosterol: Triacetyl-*d*-galac-
turonide, methyl ester, syn-
thesis (SELL and LINK)

1938, 125, 235

Skeleton: Calcium, bone extract
effect (LANDAUER, UPHAM,
and RUBIN)

1935, 108, 121

—, soft tissues and, distribu-
tion (BESSEY, KING, QUINN,
and SHERMAN)

1935, 111, 115

Maturity and calcium storage,
children, relation (HUN-
SCHER, HUMMEL, MACY,
TODD, and FRANCIS)

1937, 119, lii

Skin: Cholesterol, ultraviolet
light irradiation, effect
(KNUDSON, STURGES, and
BRYAN)

1938, 123, lxx

Glucose, determination, Hage-
dorn-Jensen method (PILLS-
BURY and KULCHAR)

1934, 106, 351

Lipids, diabetes (MATTHEWS,
NEWTON, and BLOOR)

1935, 108, 145

Oxygen uptake and composi-
tion, rats, vitamin G de-
ficiency effect (ADAMS)

1936, 116, 641

Respiration, vitamin D rela-
tion (PRESNELL)

1937, 121, 5

Steer, lipids, distribution
(KOPPENHOFER)

1936, 116, 321

See also Epidermis

Slash-pine: Fats, waxes, and
resins, growing tips (HALL
and GISVOLD)

1936, 113, 487

Slash-pine—continued:

Phloem, fatty constituents
(HALL and GISVOLD)

1935, 109, 585

Snake: Urine, glomerulus,
uric acid (BORDLEY and
RICHARDS)

1933, 101, 193

Soap(s): Potassium, vitamin A
adsorption from oils (BROCK-
LESBY and KUCHEL)

1938, 123, xvi

Sodium, vitamin A adsorption
from oils (BROCKLESBY and
KUCHEL)

1938, 123, xvi

Sodium: Biological fluids, deter-
mination, spectrographic
(THOMSON and LEE)

1937, 118, 711

— —, microdetermination,
photoelectric (HOFFMAN and
OSGOOD)

1938, 123, lviii

Blood cell, red, determination
(OBERST)

1935, 108, 153

— —, dietary sodium and
potassium, influence (BUT-
LER and MACKEY)

1934, 106, 107

— plasma, sodium and potas-
sium intake effect (POWER,
WILDER, and CUTLER)

1938, 123, xciv

— serum, determination (BALL
and SADUSK)

1936, 113, 661

— —, —, uranyl zinc acetate
method (WILKINS)

1934, 105, 177

— —, microdetermination,
uranyl zinc acetate precipi-
tation (HOFFMAN and OS-
GOOD)

1938, 124, 347

Sodium—continued:

Bone (HARRISON)

1937, 120, 457

Calcified material (HARRISON)

1937, 120, 457

Determination, colorimetric
(WOELFEL)

1938, 125, 219

Dietary, blood cell, red, so-
dium, influence (BUTLER and
MACKEY)

1934, 106, 107

Microdetermination (WEIN-
BACH)

1935, 110, 95

—, Ball and Sadusk method
(HOLMES and KIRK)

1936, 116, 377

Urine, microdetermination,
uranyl zinc acetate precipi-
tation (HOFFMAN and OS-
GOOD)

1938, 124, 347

—, sodium and potassium in-
take effect (POWER, WILDER,
and CUTLER)

1938, 123, xciv

Sodium acetoacetate: Metab-
olism, intravenous injection
effect (FRIEDEMANN)

1936, 116, 133

Sodium bicarbonate: Alkaline
reserve, ingestion effect
(CAPE and SEVRINGHAUS)

1937, 121, 549

Inorganic salts, metabolism,
ingestion effect (WILEY,
WILEY, and WALLER)

1933, 101, 73

Water metabolism, ingestion
effect (WILEY, WILEY, and
WALLER)

1933, 101, 73

Sodium chloride: Amino acids,
reaction (JOSEPH)

1935, 111, 489

Sodium chloride—continued:

Inorganic salts, metabolism, ingestion effect (WILEY, WILEY, and WALLER)

1933, 101, 73

Water metabolism, ingestion effect (WILEY, WILEY, and WALLER)

1933, 101, 73

Sodium cholate: Bile, thyroxine effect (SCHMIDT)

1937, 119, lxxxvii

Sodium citrate: Alkaline reserve, ingestion effect (CAPE and SEVRINGHAUS)

1937, 121, 549

Sodium 3, 5-dinitrobenzoate: Creatinine determination, use (LANGLEY and EVANS)

1936, 115, 333

Sodium glycocholate: Blood serum cholesterol esters, enzyme synthesis and hydrolysis, influence (SPERRY and STOYANOFF)

1937, 117, 525

Sodium hippurate: Toxic effect (GRIFFITH)

1938, 123, xlvii

Sodium hypochlorite: Chloramine-T, azochloramid, and, organic substrates, comparative action (GUITERAS and SCHMELKES)

1934, 107, 235

Sodium phosphate: Phosphorus, radioactive, phosphorus distribution (HAVEN, BALE, and LEFEVRE)

1938, 123, lii

Sodium pregnanediol glucuronide: Determination, gravimetric (VENNING)

1937, 119, 473

Sodium taurocholate: Synthesis (CORTESE and BASHOUR)

1937, 119, 177

Sodium taurodesoxycholate: Synthesis (CORTESE and BASHOUR)

1937, 119, 177

Sodium tungstate: Molybdate-free, preparation (FOLIN)

1934, 106, 311

Soil: Microorganism, polysaccharide synthesis, relation (HASSID and CHANDLER)

1937, 117, 203

Solanum indicum: Enzymes (TAUBER and KLEINER)

1934, 105, 679

Sorbitol: Amino-, hydrochloride, hydriodic acid, reduction (LEVENE and CHRISTMAN)

1938, 123, 77

Sound waves: Protein denaturation, effect (CHAMBERS and FLOSDORF)

1936, 114, 75

Soy bean: See Bean

Soy bean oil: Non-saponifiable matter, encephalomalacia, nutritional, chicks, action (GOETTSCH and PAPPENHEIMER)

1936, 114, xl

Spacings: Long, macromolecular solids (COREY and WYCKOFF)

1936, 114, 407

Specific gravity: Blood plasma, protein and, relation (WEECH, REEVES, and GOETTSCH)

1936, 113, 167

— serum, protein and, relation (WEECH, REEVES, and GOETTSCH)

1936, 113, 167

Specific gravity—continued:

Blood serum, water and solute molality, relation (SUNDERMAN) 1936, 113, 111

Transudate, protein and, relation (WEECH, REEVES, and GOETTSCH) 1936, 113, 167

Spectrophotometry: Solutions, color (SUNDERMAN and RAZEK) 1936, 114, civ

Spirographis: Hemin and hemochromogen, oxidation-reduction potentials (BARRON) 1937, 119, vi

Spleen: Lipid, blood clotting inhibitor (CHARGAFF) 1938, 125, 677

Polydiaminophosphatide reineckate (THANNHAUSER and SETZ) 1936, 116, 527

Standing: Filtration process, extremities, effect (KEYS and BUTT) 1938, 123, lxxiii

Starch(es): Amylase, viscosimetry (THOMPSON, TENNANT, and WIES) 1935, 108, 85

Hydrolysis, enzymic and acid, conversion products (SOMOGYI) 1934, 105, lxxxi

—, hydrogen peroxide and ferrous sulfate (BROWN) 1936, 113, 417

Leaf, isolation and properties (SPOEHR and MILNER) 1935, 111, 679

Molecular size determination, periodic acid oxidation (CALDWELL and HIXON) 1938, 123, 595

Starch(es)—continued:

Plant, isolation, freezing method (SPOEHR and MILNER) 1936, 116, 493

Polysaccharide, apple tree leaf tissue, isolation and properties (NIEMANN, ANDERSON, and LINK) 1936, 116, 447

—, — — woody tissue, isolation and properties (NIEMANN, ROBERTS, and LINK) 1935, 110, 727

Split-products, diastatic (SOMOGYI) 1938, 124, 179

Substrates, amylase determination, preparation (THOMPSON) 1935, 109, 201

Starfish: Sterols (BERGMANN) 1937, 117, 777

Stearic acid: *dl*- α -Hydroxy-, oxidation and derivatives (LEVENE and YANG) 1933, 102, 557

—, —, cerebronic acid chemical constitution, relationship (KLENK and DITT) 1935, 111, 749

(LEVENE and YANG) 1935, 111, 751

Palmitic acid, conversion, deuterium as indicator (SCHOENHEIMER and RITTENBERG) 1937, 120, 155

Stems: Fat and sterol metabolism (MACLACHLAN) 1936, 114, 185

Stercobilin: Crystalline, isolation (WATSON) 1934, 105, 469

Origin (WATSON) 1936, 114, 47

Sterility: Male, fat-free diet effect
(EVANS, LEPKOVSKY, and MURPHY) 1934, 106, 445

Steroid compounds: Built-up films (SOBOTKA and BLOCH) 1938, 124, 559

Sterol(s): Absorbability (SPERRY and BERGMANN) 1937, 119, 171

Absorption, specificity (SCHOENHEIMER, SPERRY, and DAM) 1935, 109, lxxix

Balance, dietary fat effect (ECKSTEIN) 1938, 125, 107

Blood, nature, Liebermann-Burchard reaction (REINHOLD) 1934, 105, lxxi

Bombicysterol (BERGMANN) 1934, 107, 527

Cerevisterol relation (HONEYWELL and BILLS) 1933, 103, 515

Chemical activation (YODER) 1936, 116, 71
(ECK, THOMAS, and YODER) 1937, 117, 655

(ECK and THOMAS) 1937, 119, 621, 631

Colloids, short electric waves, effect (MALISOFF and STENBUCK) 1936, 115, 87

Derivatives, provitamin D potency (KOCH and KOCH) 1936, 116, 757

Hair, dietary fat effect (ECKSTEIN) 1938, 125, 107

Hemolytic properties (BERLINER) 1937, 119, xi

— —, structure relation (BERLINER and SCHOENHEIMER) 1938, 124, 525

Sterol(s)—continued:

Liebermann-Burchard reaction, spectrophotometric studies (MORGAREIDGE) 1935, 109, lxxvii

Metabolism, fat ingestion effect (ECKSTEIN and TREADWELL) 1935-36, 112, 373

—, lipids, saponifiable and unsaturated, effect (ECKSTEIN) 1938, 125, 99

—, plants (MACLACHLAN) 1936, 113, 197
1936, 114, 185

Mollusks (BERGMANN) 1934, 104, 317

Plant, intestine, fate (BREUSCH) 1938, 124, 151

-Related compounds, absorption spectra (HOGNESS, SIDWELL, and ZSCHEILE) 1937, 120, 239

Secretion, coprosterol formation and (SCHOENHEIMER and SPERRY) 1934, 107, 1

Silkworm feces (BERGMANN) 1937, 117, 175

Starfish (BERGMANN) 1937, 117, 777

Vitamin D-containing materials, separation (NATELSON and SOBEL) 1935, 109, 687

Sterol dibromides: Iodides, action (SCHOENHEIMER) 1935, 110, 461

Stigmasterol: Mollusks (BERGMANN) 1937, 118, 499

Stomach: Emptying rate, glucose intragastric administration,

Stomach—continued:

- effect (PIERCE, HÆGE, and FROESCHLE) 1937, 119, lxxviii
- Gastric juice, acidity and composition, relation (HOLLANDER) 1934, 104, 33
- — —, mucus secretion, relation (HELMER, FOUTS, and ZERFAS) 1934, 105, xxxvii
- — —, enzyme, urea-splitting, protein, relation (MARTIN) 1933, 102, 131
- — —, mucoitinsulfuric acid isolation (KOMAROV) 1935, 109, 177
- — —, neutral chloride-hydrochloric acid relation (HOLLANDER) 1938, 125, 161
- — —, pepsin, protein, relation (MARTIN) 1933, 102, 131
- — —, proteins (MARTIN) 1933, 102, 113
- secretion, urine alkaline tide, relation (HUBBARD, MUNFORD, and TYNER) 1933, 101, 781
- Glucose entering rate (KARR, AUSTIN, ABBOTT, and HOFFMAN) 1937, 119, lv
- fate (HOFFMAN, ABBOTT, KARR, and MILLER) 1938, 123, lvii
- Mucin, mucoitin disulfuric acid, isolation (MEYER and SMYTH) 1938, 123, lxxxiv
- Mucosa, polysaccharides, pig (MEYER, SMYTH, and PALMER) 1937, 119, 73, lxix
- Phospholipid metabolism, rôle, ingested fat effect (FRIES,

Stomach—continued:

- RUBEN, PERLMAN, and CHAIKOFF) 1938, 123, 587
- Secretion, pilocarpine effect (HOLLANDER and SALTZMAN) 1938, 123, lix
- Ulcer-producing substance, isolation, muscle (TASHIRO) 1937, 119, xcvi
- Stone: Cystine, hair cystine, identity (LORING and DU VIGNEAUD) 1934, 107, 267
- Stratum corneum: Amino acids, human keratins, comparison (WILKERSON) 1934, 107, 377
- Isoelectric point (WILKERSON) 1935-36, 112, 329
- Keratins, isoelectric point (WILKERSON) 1935, 109, xcix
- ζ-Potential, salts, effect (WILKERSON) 1938, 123, cxxviii
- Straw: Oat, lignin (PHILLIPS and Goss) 1936, 114, 557
- Streptococcus: Hemolytic, fibrinolytic enzyme (GARNER) 1935, 109, xxxvi
- , Group A mucoid strains, polysaccharide (KENDALL, HEIDELBERGER, and DAWSON) 1937, 118, 61
- Nucleoproteins, components, serologically active, isolation (SEVAG, LACKMAN, and SMOLENS) 1938, 124, 425
- Polysaccharide acids, hydrolysis by pneumococcus autolytic enzyme (MEYER, DUBOS, and SMYTH) 1937, 118, 71

- Streptococcus hæmolyticus:** β -,
diaminodiphenyl sulfide,
diaminodiphenyl sulfone,
and related compounds,
effect (RAIZISS, SEVERAC,
MOETSCH, and CLEMENCE)
1938, 123, xcix
- Streptococcus viridans:** Infec-
tion, lipemia, rabbits (BOYD,
ORR, and REED)
1938, 124, 409
- Methemoglobin formation
(FISHBERG and BAUM)
1938, 123, xxxv
- Strontium:** Microdetermination
(SOBEL, PEARL, and KRA-
MER) 1936, 114, xcvii
(SOBEL, PEARL, GERCHICK,
and KRAMER)
1937, 118, 47
- Strontium citrate:** Ionization
(HASTINGS, McLEAN, EICH-
ELBERGER, HALL, and DA
COSTA) 1934, 107, 351
- Strophanthidin(s):** Acid
($C_{23}H_{30}O_8$) from nature (ELD-
ERFIELD) 1936, 113, 631
- Anhydro- (JACOBS and ELDER-
FIELD) 1935, 108, 693
- Degradation (JACOBS and
ELDERFIELD)
1933, 102, 237
- Dehydrogenation (ELDERFIELD
and JACOBS)
1934, 107, 143
- Dihydro-, cyanhydrin syn-
theses with (JACOBS and
ELDERFIELD)
1936, 113, 625
- Trianhydro-, derivatives, ultra-
violet absorption spectra
(ELDERFIELD and ROTHEN)
1934, 106, 71
- Strophanthin:** (JACOBS and
ELDERFIELD)
1933, 102, 237
(ELDERFIELD and ROTHEN)
1934, 106, 71
(ELDERFIELD and JACOBS)
1934, 107, 143
(JACOBS and ELDERFIELD)
1935, 108, 693
1936, 113, 625
(ELDERFIELD)
1936, 113, 631
- Anhydroaglucone derivatives,
oxidation (JACOBS and
ELDERFIELD)
1936, 113, 611
- Styracitol:** Metabolism (CARR,
FORMAN, and KRANTZ)
1938, 123, xviii
- Substitution reaction:** Walden
inversion and, mechanism
(LEVENE, ROTHEN, and
KUNA) 1937, 120, 777
1937, 121, 747
- Substrate:** Catalyst-, com-
pounds, chemical reactions,
method for recording (STERN
and DuBois)
1936, 116, 575
- Succinate:** -Fumarate-enzyme
system (STOTZ and HAST-
INGS) 1937, 118, 479
- Succinioxidase:** Inhibitors (POT-
TER and ELVEHJEM)
1937, 117, 341
- Sucrose:** Excretion, intravenous
injection effect (POWER and
KEITH) 1936, 114, lxxx
- Plant juice, microdetermina-
tion (SCHLENKER)
1933, 102, 29
- Ultrafiltration (FLEXNER)
1937, 121, 615

Sucrosuria: (SOBOTKA, REINER, and WEINER)

1938, 123, cxii

Sugar(s): Acetals (CAMPBELL and LINK)

1937-38, 122, 635

Acetoacetic acid, reaction (FRIEDEMANN and KLAAS)

1935, 109, xxxiv

Acids, preparation, *d*-glucose (HART, SHEPPARD, and EVERETT)

1938, 123, lii

Alcohols (CARR and KRANTZ)

1938, 124, 221

Amino, determination (PALMER and MEYER)

1935, 109, lxxiii

Blood plasma, heparinized and oxalated (NEUWIRTH)

1937, 120, 463

Determination, ferricyanide electrode (SHAFFER and WILLIAMS)

1935, 111, 707

—, nitrogenous substances, effect (SHEPPARD and EVERETT)

1935, 109, lxxxii

—, precipitating agents (WEST, LANE, and CURTIS)

1935, 109, xcvi

Fermentable, heart (CORI, CLOSS, and CORI)

1933, 103, 13

—, muscle, skeletal (CORI, CLOSS, and CORI)

1933, 103, 13

Fermentation, colon and aerogenes bacteria (POE and KLEMM)

1935, 109, 43

Free, brain, insulin and epinephrine, effect (KERR, HAMPEL, and GHANTUS)

1937, 119, 405

Sugar(s)—continued:

Free, brain, mammalian, carbohydrate and insulin effect (KERR and GHANTUS)

1936, 116, 9

Method, Shaffer-Hartmann, potentiometric adaptation (NEY and WEST)

1936, 114, 547

Microdetermination, copper-iodometric (SOMOGYI)

1937, 117, 771

Non-, reducing substances, plant juices (SCHLENKER)

1937, 117, 727

Pyridine action (LEVENE and HILL)

1933, 102, 563

Radicals, mucoids (MEYER and PALMER)

1935, 109, lxxv

Reducing, plant juice, microdetermination (SCHLENKER)

1933, 102, 29

Thio (RAYMOND and LEVENE)

1934, 105, lxx

(RAYMOND) 1934, 107, 85

Urine, normal, nature (EVERETT, EDWARDS, and SHEPPARD)

1934, 104, 11

Sugar-beet: Hydrogen ion concentration, carbon dioxide effect (FIFE and FRAMPTON)

1935, 109, 643

Nitrogen fractions, carbon dioxide effect (FIFE and FRAMPTON)

1935, 109, 643

Sulfanilamide: Acetylation (KLEIN and HARRIS)

1938, 124, 613

Biological media, determination (SCUDI)

1937-38, 122, 539

Sulfanilamide—*continued*:

Blood, determination (MARSHALL) 1937-38, 122, 263

— filtrates, determination, sodium β -naphthoquinone-4-sulfonate (SCHMIDT) 1937-38, 122, 757

Milk, secretion (HEPBURN, PAXSON, and ROGERS) 1938, 123, liv

Urine, determination (MARSHALL) 1937-38, 122, 263

—, infant, secretion (HEPBURN, PAXSON, and ROGERS) 1938, 123, liv

Sulfanilic acid: Diazotized, proteins and, reaction (EAGLE and VICKERS) 1936, 114, 193

Sulfate(s): Etheral, blood serum, determination, benzdine (POWER and WAKEFIELD) 1938, 123, 665

Inorganic, blood serum and urine, determination, colorimetric (LETONOFF and REINHOLD) 1936, 114, 147

—, — —, determination (HOFFMAN and CARDON) 1935, 109, 717

—, — —, benzidine (POWER and WAKEFIELD) 1938, 123, 665

—, — —, dextrose ingestion, effect (MATTICE, BRUGER, and DEREN) 1935, 109, lx

Proteins, determination (BAERNSTEIN) 1936, 115, 33
(KASSELL and BRAND) 1938, 125, 145

Sulfenic acid: Formation, cysteine oxidation (TOENNIES) 1937, 119, xcix
1937-38, 122, 27

Sulfhemoglobin: (MICHEL) 1938, 123, lxxxv

Determination, photoelectric colorimeter (EVELYN and MALLOY) 1938, 123, xxxiv

Spectrophotometry (DRABKIN and AUSTIN) 1935-36, 112, 51

Sulfhydryl: Oxidation-reduction potentials (BORSOOK, ELLIS, and HUFFMAN) 1937, 117, 281

Yeast fermentation inhibition, iodoacetic acid, relation (SCHROEDER, WOODWARD, and PLATT) 1933, 101, 133

Sulfhydryl compounds: Insulin, effect (WINTERSTEINER) 1933, 102, 473
— inactivation effect (SCHOCK, JENSEN, and HELLERMAN) 1935, 111, 553

Phosphotungstic acid reaction rate (KASSELL and BRAND) 1938, 125, 131

Sulfite reaction rate (KASSELL and BRAND) 1938, 125, 131

Sulfhydryl group(s): Egg albumin solutions (GREENSTEIN) 1938, 125, 501

Hypotrichosis, hereditary, trichogenic action (MARTIN and GARDNER) 1935, 111, 193

Sulfhydryl group(s)—*continued*:

Iodoacetate and iodoacetamide reaction (SMYTHE)

1936, 114, xcv, 601

Vitamin B₂ deficiency, rôle (ITTER, ORENT, and MCCOLLUM) 1935, 108, 585

Sulfinic acid: Formation, cysteine oxidation with iodine (SIMONSEN)

1933, 101, 35

Sulfite(s): Cystine determination (SHINOHARA)

1935-36, 112, 683

Disulfide compounds, reaction rate (KASELL and BRAND)

1938, 125, 131

Protein precipitants (CAMPBELL and HANNA)

1937, 119, 9

Sulfhydryl compounds, reaction rate (KASELL and BRAND)

1938, 125, 131

Sulfonic acid: Diazobenzene, theelin determination, reagent (SCHMULOVITZ and WYLIE)

1936, 116, 415

Sulfur: Casein, distribution (KASELL and BRAND)

1938, 125, 435

-Containing amino acids, growth effect (BRAND)

1938, 123, xv

— — —, nutrition deficiency, iodoacetic acid effect (SIMON and WHITE)

1938, 123, cix

d-Cystine, acetyl and formyl derivatives, oxidation, animal body (DU VIGNEAUD, LORING, and CRAFT)

1934, 107, 519

Sulfur—*continued*:

l-Cystine, acetyl and formyl derivatives, oxidation, animal body (DU VIGNEAUD, LORING, and CRAFT)

1934, 107, 519

Dietary, *p*-bromophenylmercapturic acid synthesis, effect (STEKOL)

1937, 117, 147

Edestin, distribution (KASELL and BRAND)

1938, 125, 435

Homocystine, oxidation, body (DU VIGNEAUD and CRAFT)

1934, 105, xcvi

(DU VIGNEAUD, LORING, and CRAFT) 1934, 105, 481

Labile, proteins (ZAHND and CLARKE)

1933, 102, 171

Lactalbumin, distribution (KASELL and BRAND)

1938, 125, 435

Limulus hemocyanin, distribution (MAZUR)

1937, 118, 631

Metabolism (CHASE and LEWIS)

1933, 101, 735

(VIRTUE and LEWIS)

1934, 104, 59

(LEWIS and FRAYSER)

1935, 110, 23

(LEWIS, BROWN, and WHITE) 1936, 114, 171

(WHITE, LEWIS, and WHITE)

1937, 117, 663

(HEARD and LEWIS)

1938, 123, 203

—, cat (VIRTUE)

1936, 114, cvi

—, dog and pig, comparison (STEKOL) 1936, 113, 675

Sulfur—continued:

- Metabolism, pituitary, anterior, growth preparation, effect (GAEBLER and PRICE)
1936, 114, xxxix
- , suprarenalectomized rats (SANDBERG and PERLA)
1936, 113, 35
- Methionine, determination, Benedict-Denis method (RUTENBER and ANDREWS)
1937, 120, 203
- , oxidation, body (DU VIGNEAUD, LORING, and CRAFT)
1934, 105, 481
- S-Methylcysteine, oxidation, body (DU VIGNEAUD, LORING, and CRAFT)
1934, 105, 481
- Naphthalene with, growth effect (STEKOL)
1937, 121, 87
- Papain, distribution (KASELL and BRAND)
1938, 125, 435
- Proteins (BLUMENTHAL and CLARKE)
1935, 110, 343
- , determination (BAERNSTEIN)
1936, 115, 33
- , distribution (BAERNSTEIN)
1934, 105, vi
- Total, biological materials, determination, Benedict-Denis (RUTENBER and ANDREWS)
1937, 119, lxxxvi
- , plants and proteins, determination (PAINTER and FRANKE)
1936, 114, 235
- Urine, cystinuria, distribution, dog (GREEN, MORRIS, CAHILL, and BRAND)
1936, 114, 91

Sulfur compounds: Absorption, intestinal loops (ANDREWS and JOHNSTON)

1933, 101, 635

Reduction to hydrogen sulfide, intestinal microorganisms (ANDREWS)

1937-38, 122, 687

Suprarenal: See Adrenal

Suprarenalectomy: Nitrogen and sulfur metabolism (SANDBERG and PERLA)

1936, 113, 35

Sweat: See Perspiration

Swine: Blood (EVELETH)

1934, 104, 559

(EVELETH and EVELETH)

1935, 111, 753

Feces nitrogen (SCHNEIDER)

1935, 109, 249

Sulfur metabolism, dog and, comparison (STEKOL)

1936, 113, 675

T

Tartaric acid: Levo-, polygalacturonide methyl ester oxidation and hydrolysis (LEVENE and KREIDER)

1937, 120, 591

Taurine: *Audovinia spirabranchus* (KURTZ and LUCK)

1935, 111, 577

Formation, cysteic acid relation (WHITE and FISHMAN)

1936, 116, 457

Glycyl-, preparation (WHITE)

1933, 102, 249

Mercapturic acid synthesis, relation (STEKOL)

1937-38, 122, 333

Taurine—continued:

Metabolism (WHITE, LEWIS,
and WHITE)

1937, 117, 663

Taurocholate: Sodium, synthesis
(CORTESE and BASHOUR)

1937, 119, 177

Taurocholic acid: Precursors
(VIRTUE and DOSTER-VIR-
TUE)

1937, 119, ci

Production, dog (VIRTUE and
DOSTER-VIRTUE)

1937, 119, 697

Taurodesoxycholate: Sodium,
synthesis (CORTESE and
BASHOUR)

1937, 119, 177

Temperature: Body, 1,5-di-
phenylpyrazoline - 3 - car-
boxylic acid effect, environ-
mental temperature influ-
ence (SCHULTZ and HILL)

1938, 123, cvi

Environmental, nitrogen and
creatine metabolism, rela-
tion (BODANSKY and DUFF)

1936, 114, xiii

High, chemical adjustments
(FISHBERG, BIERMAN, and
WEISS)

1936, 114, xxxv

Testicle: Hormone, comb re-
sponse, light, relation (KOCH
and GALLAGHER)

1934, 105, xlix

Testis: Concentrates, estrus-in-
hibiting substances (DUN-
CAN, GALLAGHER, and KOCH)

1937, 119, xxvii

Creatine, thyroid and thyrox-
ine effect (BODANSKY)

1935, 109, 615

Extract, bull (GALLAGHER and
KOCH)

1934, 105, xxx

Testis—continued:

Hormone, alkali effect (GAL-
LAGHER and KOCH)

1934, 104, 611

Testosterone: Activation, fatty
acids, higher, and acid so-
dium salts (EHRENSTEIN and
COREY)

1937-38, 122, 297

Androgenic substances, excre-
tion effect (DORFMAN)

1938, 123, xxx

Tetany: Calcium-low diet, pro-
duction (SHOHL)

1935, 109, lxxxv

Milk-produced (DUNCAN,
HUFFMAN, and ROBINSON)

1935, 108, 35

Parathyroid, blood serum
phosphates, relation (JONES)

1936, 114, liv

1936, 115, 371

Tetraacetylglucuronic acid: α -
and β -, methyl ester, syn-
thesis (GOEBEL and BABERS)

1934, 106, 63

Tetradeuterohomocystine: Syn-
thesis (PATTERSON and DU
VIGNEAUD)

1938, 123, 327

Thallous chloride: Activity co-
efficient, protein systems
(STONE and FAILEY)

1934, 105, lxxxvi

Amino acids, reaction (JO-
SEPH)

1935, 111, 489

Theelin: Body glycogen, effect
(GULICK, SAMUELS, and
DEUEL)

1934, 105, 29

By-product, crystalline (Dox,
BYWATER, and TENDICK)

1935-36, 112, 425

Theelin—continued:

- Chemistry (MACCORQUODALE, LEVIN, and THAYER) 1934, 105, lv
- Determination, colorimetric (CARTLAND, MEYER, MILLER, and RUTZ) 1935, 109, 213
- , diazobenzenesulfonic acid reagent (SCHMULOVITZ and WYLIE) 1936, 116, 415
- Diacetic acid metabolism, normal and castrated rats, effect (GRUNEWALD, CUTLER, and DEUEL) 1934, 105, 35
- Excretion and metabolism, sexually immature rat (DORFMAN) 1937, 119, xxv
- Oxidation (MACCORQUODALE, LEVIN, THAYER, and DOISY) 1933, 101, 753
- Preparation from urines and theelol, comparison (CURTIS, MACCORQUODALE, THAYER, and DOISY) 1934, 107, 191 (CARTLAND, MEYER, MILLER, and RUTZ) 1935, 109, 213
- Reproduction effect (WADE) 1934, 105, xcvi
- Theelol:** Activity, castration effect (CURTIS, MILLER, and WITT) 1937, 119, xxi
- Biological activity (MEYER, MILLER, and CARTLAND) 1935-36, 112, 597
- By-product, crystalline (DOX, BYWATER, and TENDICK) 1935-36, 112, 425

Theelol—continued:

- Chemistry (MACCORQUODALE, LEVIN, and THAYER) 1934, 105, lv
- Derivatives, oxidation (MACCORQUODALE, LEVIN, THAYER, and DOISY) 1933, 101, 753
- Determination, colorimetric (CARTLAND, MEYER, MILLER, and RUTZ) 1935, 109, 213
- Reproduction effect (WADE) 1934, 105, xcvi
- Theelin from urines and, comparison (CURTIS, MACCORQUODALE, THAYER, and DOISY) 1934, 107, 191 (CARTLAND, MEYER, MILLER, and RUTZ) 1935, 109, 213
- Theophylline-*d*-allomethyloside:** Synthesis (LEVENE and COMPTON) 1937, 117, 37
- Theophylline-5-methyl-rhamnofuranoside:** Synthesis (LEVENE and MUSKAT) 1934, 106, 761
- Theophylline-5-methyl-*l*-rhamnofuranoside:** (LEVENE and COMPTON) 1936, 114, 9
- Thevetia neriifolia:** *See* Be-still nut
- Thevetin:** (ELDERFIELD) 1936, 115, 247
- Thiamine:** Body fat, effect (MCHENRY and GAVIN) 1938, 125, 653
- Deficiency, growth-promoting pituitary extract, effect (BURKE and MCINTYRE) 1938, 123, xvii

- Thiobutyric acid:** γ -, metabolism, cystinuria (BRAND, BLOCK, and CAHILL) 1937, 119, 689
- Thiocyanate:** -Cyanide conversion, thyroid relation (BAUMANN, SPRINSON, and METZGER) 1933, 102, 773
- Excretion (BAUMANN, METZGER, and SPRINSON) 1934, 105, ix
- Tissues, determination (BRODIE and FRIEDMAN) 1937, 120, 511
- Urine, determination (BAUMANN, SPRINSON, and METZGER) 1934, 105, 269
- Thioglycolic acid:** Oxidation, metal, buffer, and dithiol, effect (KHARASCH, LEGAULT, WILDER, and GERARD) 1936, 113, 537
- Thiol acid(s):** Aldehydes, compounds (SCHUBERT) 1936, 114, 341
- Methylglyoxal, combination (SCHUBERT) 1935, 111, 671
- Oxidation, copper microdetermination, relation (BJERRUM) 1936, 114, 357
- Thiolactone:** Homocysteine, conversion relation (RIEGEL and DU VIGNEAUD) 1935-36, 112, 149
- Thiol compounds:** Blood serum phosphatase activity, effect (THANNHAUSER, REICHEL, GRATTAN, and MADDOCK) 1937, 121, 721
- Determination (SHINOHARA) 1935, 109, 665
1935, 110, 263
1935-36, 112, 671, 683
- Thiol compounds—continued:**
(SHINOHARA and PADIS) 1935-36, 112, 697, 709
(SHINOHARA) 1937, 120, 743
- Mercuric chloride reaction (SHINOHARA) 1935, 111, 435
- Phospho-18-tungstic acid, color reaction (SHINOHARA) 1935, 109, 665
- Thioneine:** *See also* Ergothioneine
- Thionine:** Nucleoprotein and mucin staining (KELLEY and MILLER) 1935, 110, 119
- Thio sugars:** (RAYMOND and LEVENE) 1934, 105, lxx
(RAYMOND) 1934, 107, 85
- Thiourea:** Cysteine and corresponding disulfides, relations (TOENNIES) 1937, 120, 297
- Thoracic duct:** Lymph, lipids (REISER) 1937, 120, 625
—, —, fasting (RONY, MORTIMER, and IVY) 1933, 102, 161
- Thorium nitrate:** Blood serum and urine ashing, use (STRAUSS) 1937, 118, 331
- Threonine:** *d*(-)-, preparation (WEST and CARTER) 1937, 119, 109
- d*-Allo-, preparation and nutrition value (WEST and CARTER) 1937-38, 122, 611
- dl*-Allo-, preparation (WEST, KRUMMEL, and CARTER) 1937-38, 122, 605
- l*(+)-, preparation (WEST and CARTER) 1937, 119, 109

Threonine—continued:

l-Allo-, preparation and nutrition value (WEST and CARTER) 1937-38, 122, 611

See also α -Amino- β -hydroxy-*n*-butyric acid

Thrombin: Species differences (QUICK) 1938, 123, xcix

Thromboplastin: Species differences (QUICK) 1938, 123, xcix

Thymidine: Ring structure (LEVENE and TIPSON) 1935, 109, 623

Thymus: Vitamin C, histological changes, relation (GLICK and BISKIND) 1936, 114, 1

Thyroglobulin: Absorption spectrum, ultraviolet (HEIDT) 1936, 115, 223

Adipose tissue, effect (PAQUIN and ANDERSON) 1936, 114, lxxix

Iodine (CAVETT, RICE, and McCLENDON) 1935, 109, xvii

— and thyroxine, normal and goitrous (CAVETT, RICE, and McCLENDON) 1935, 110, 673

Nitrogen distribution, tyrosine and tryptophane, normal and goitrous (CAVETT) 1936, 114, 65

Preparation and properties (HEIDELBERGER and PALMER) 1933, 101, 433

Thyroxine (CAVETT, RICE, and McCLENDON) 1935, 109, xvii

Thyroid: Calorigenic potency (FOSTER, PALMER, and LELAND) 1936, 115, 467

Thyroid—continued:

Cyanide-thiocyanate, relation (BAUMANN, SPRINSON, and METZGER) 1933, 102, 773

Diiodotyrosine peptone, myxedema-relieving artificial protein, relation (SALTER and PEARSON) 1935-36, 112, 579

Function, nitrogen and creatine metabolism, relation (BODANSKY and DUFF) 1936, 114, xiii

Heart creatine, effect (BODANSKY) 1935, 109, 615

Iodine, iodide and diiodotyrosine administration effect (FOSTER) 1934, 104, 497

— microdetermination (BLAU) 1938, 123, xii

Muscle and liver creatine, effect (BODANSKY) 1935, 109, 615

Organ vitamin C, ascorbic acid administration with, effect (SVIRBELY) 1935, 111, 147

Protein, peptic digest, thyroxine (FOSTER, PALMER, and LELAND) 1936, 115, 467

Testes, creatine, effect (BODANSKY) 1935, 109, 615

Thyroxine, determination (BLAU) 1933, 102, 269 1935, 110, 351

—, iodide and diiodotyrosine administration effect (FOSTER) 1934, 104, 497

— microdetermination, newborn (PALMER, LELAND, and GUTMAN) 1938, 125, 615

Thyroidectomy: Organ and tissue proteins, thyroxine and dinitrophenol administration effect (ADDIS, KARNOFSKY, LEW, and POO)

1938, 124, 33

Thyronine: Absorption spectrum, ultraviolet (HEIDT)

1936, 115, 223

Thyroparathyroidectomy: Blood serum calcium, calciferol effect (TWEEDY, McNAMARA, TEMPLETON, and PATRAS)

1937, 119, xcix

Tissue calcium, effect (UNDERHILL and JALESKI)

1933, 101, 11

— potassium, effect (UNDERHILL and JALESKI)

1933, 101, 11

Thyrotropic hormone: Body weight and nitrogen metabolism, effect (GAEBLER and BARTLETT)

1938, 123, xl

Pituitary gland, determination, chemical (McCULLAGH and STIMMEL)

1935, 109, lxii

Thyroxine: Absorption spectrum, ultraviolet (HEIDT)

1936, 115, 223

Adipose tissue, effect (PAQUIN and ANDERSON)

1936, 114, lxxix

Bile sodium cholate, effect (SCHMIDT)

1937, 119, lxxxvii

Blood lipids, injection effect (SCHMIDT and BRADFORD)

1934, 105, lxxv

Body weight, effect (GAEBLER and BARTLETT)

1938, 123, xl

Thyroxine—continued:

dl-, calorogenic potencies, comparison (FOSTER, PALMER, and LELAND)

1936, 115, 467

Heart creatine, effect (BODANSKY)

1935, 109, 615

l-, calorogenic potencies, comparison (FOSTER, PALMER, and LELAND)

1936, 115, 467

Muscle and liver creatine, effect (BODANSKY)

1935, 109, 615

Nitrogen metabolism, effect (GAEBLER and BARTLETT)

1938, 123, xl

Organ and tissue proteins, thyroidectomy and, effect (ADDIS, KARNOFSKY, LEW, and POO)

1938, 124, 33

Testes, creatine, effect (BODANSKY)

1935, 109, 615

Thyroglobulin (CAVETT, RICE, and McCLENDON)

1935, 109, xvii

—, normal and goitrous (CAVETT, RICE, and McCLENDON)

1935, 110, 673

Thyroid, determination (BLAU)

1933, 102, 269

1935, 110, 351

—, iodide and diiodotyrosine administration effect (FOSTER)

1934, 104, 497

—, new-born, microdetermination (PALMER, LELAND, and GUTMAN)

1938, 125, 615

— protein peptic digest (FOSTER, PALMER, and LELAND)

1936, 115, 467

Thyroxine—continued:

Tissue lipids, injection effect
(SCHMIDT and BRADFORD)
1934, 105, lxxv

Timothy-grass bacillus: Protein
fractions (MENZEL and HEI-
DELBERGER)

1938, 124, 301

Trehalose isolation (PANGBORN
and ANDERSON)

1933, 101, 105

Tissue(s): (*See note on p. 221*)

Adipose, thyroglobulin and
thyroxine effect (PAQUIN and
ANDERSON)

1936, 114, lxxix

Adrenal insufficiency, effect
(DARROW and HARRISON)

1938, 123, xxvii

Alanine oxidation by (BERN-
HEIM and BERNHEIM)

1934, 106, 79

Alcohol oxidation, alloxan
effect (BERNHEIM)

1938, 123, 741

Analysis (GRAESER, GINSBERG,
and FRIEDEMANN)

1934, 104, 149

Animal, alcohol-extracted, nu-
tritive value (SEEGERs and
MATTILL)

1934, 105, lxxvii

Ash, dietary inorganic salts,
relation (EPPRIGHT and
SMITH)

1937, 118, 679

Carbohydrates, determination
(BLATHERWICK, BRADSHAW,
EWING, LARSON, and
SAWYER)

1935, 111, 537

Connective. *See* Connective
tissue

Tissue(s)—continued:

Dehydration, effect (HAMIL-
TON and SCHWARTZ)
1935, 109, 745

Dehydroascorbic acid reduc-
tion, guinea pig (SCHULTZE,
STOTZ, and KING)
1937-38, 122, 395

Digestion (CULLEN and WIL-
KINS) 1933, 102, 403

Epinephrine destruction
(KOEHLER) 1934, 105, p. 1

Extracts, blood serum cho-
lesterol esterification, effect
(SPERRY) 1936, 113, 599

—, glucose-1-phosphoric acid
formation (CORI, COLOWICK,
and CORI) 1938, 123, 375

—, — ester conversion to 6-
ester (CORI, COLOWICK, and
CORI) 1938, 124, 543

Frog, hypertrophy, lipids, rela-
tion (BOYD)
1937, 121, 783

Human, electrolytes, deter-
mination (CULLEN and
WILKINS) 1933, 102, 403

—, —, disease effect (CULLEN,
WILKINS, and HARRISON)
1933, 102, 415

Inhibitors, oxidations, bio-
logical, metal catalysts and,
effect (KHARASCH, LEGAULT,
WILDER, and GERARD)
1936, 113, 557

Isolated, nitrogen metabolism
(BORSOOK and JEFFREYS)
1935, 110, 495

Lipid chlorine (CHRISTENSEN
and CORLEY)
1938, 123, 129

Tissue(s)—continued:

- Lipids, cholesterol ingestion, effect (CHANUTIN and LUDEWIG) 1933, 102, 57
- , microdetermination, gasometric (KIRK, PAGE, and VAN SLYKE) 1934, 106, 203
- , thyroxine injection effect (SCHMIDT and BRADFORD) 1934, 105, lxxv
- Magnesium-low diet, effect (GREENBERG, ANDERSON, and TUFTS) 1936, 114, xliii
- Metabolism, lactoflavin and vitamin B₆ deficiency, effect (MUUS, BESSEY, and HASTINGS) 1937, 119, lxxii
- Methemoglobin formation (BERNHEIM and MICHEL) 1937, 118, 743
- Models, polarization (SPIEGEL-ADOLF) 1936, 114, xcix
- Nitrogen partition (AYRES and LEE) 1936, 115, 139
- Nutrients, alcohol extraction and heating, effect (SEEGERS) 1935, 109, lxxx
- Oxidations, method for study (POTTER and ELVEHJEM) 1936, 114, 495
- Parathyroid extract effect (MORGAN and SAMISCH) 1934, 105, lxiv
1935, 108, 741
- Phospholipids, elaidic acid, relation (SINCLAIR) 1935, 111, 515
- , fatty acids, unsaturated, selection and retention (SINCLAIR) 1935, 111, 275

Tissue(s)—continued:

- Proline oxidation by (BERNHEIM and BERNHEIM) 1934, 106, 79
- Proteins, amino acid, basic, anlage (BLOCK) 1934, 105, 663
- , composition (GRAFF, MACULLA, and GRAFF) 1937, 121, 71
(GRAFF and GRAFF) 1937, 121, 79
(GRAFF, MACULLA, and GRAFF) 1937, 121, 81
- , dietary cystine effect (LEE and LEWIS) 1934, 107, 649
- , fasting and refeeding effect (LEE and LEWIS) 1934, 107, 649
- , — effect (ADDIS, POO, and LEW) 1936, 115, 111
- , formation rate, casein refeeding effect (ADDIS, POO, and LEW) 1936, 116, 343
- , thyroidectomy, thyroxine and dinitrophenol administration effect (ADDIS, KARNOFSKY, LEW, and POO) 1938, 124, 33
- Purines, determination (GRAFF and MACULLA) 1935, 110, 71
- Respiration, copper relation (ELVEHJEM, COHEN, and STARE) 1934, 105, xxv
- , fluorosis and scurvy (PHILIPS, STARE, and ELVEHJEM) 1934, 106, 41
- , normal and scorbutic animals (STOTZ, HARRER, SCHULTZE, and KING) 1937, 120, 129

Tissue(s)—continued:

- Viosterol effect (MORGAN and SAMISCH) 1934, 105, lxiv
1935, 108, 741
- Toad: Poison, chemistry (JENSEN) 1935, 109, xliv
1937, 119, lii
- Secretions, basic constituents (JENSEN and CHEN) 1936, 116, 87
- Tropical, secretion (JENSEN and EVANS) 1934, 104, 307
- Venom, Chinese, ch'an su (JENSEN and EVANS) 1934, 104, 307
- Tobacco: Leaf, amides, metabolism (VICKERY, PUCHER, WAKEMAN, and LEAVENWORTH) 1937, 119, 369
- , asparagine (VICKERY and PUCHER) 1936, 113, 157
- , glutamine (VICKERY and PUCHER) 1936, 113, 157
- , malic acid (PUCHER, CLARK, and VICKERY) 1937, 117, 599
- , organic acids, metabolism during culture (PUCHER, WAKEMAN, and VICKERY) 1937, 119, 523
- Mosaic protein, crystalline, aucuba mosaic virus, relation (STANLEY) 1937, 117, 325
- — —, x-ray diffraction patterns (WYCKOFF and COREY) 1936, 116, 51
- virus, plants diseased with, virus proteins, crystalline, ultracentrifugal analysis (WYCKOFF, BISCOE, and STANLEY) 1937, 117, 57

Tobacco—continued:

- Mosaic virus protein, activity and yield (STANLEY) 1937, 121, 205
- — — —, factors influencing (STANLEY) 1937, 117, 755
- — — —, measurement (LORING) 1937, 121, 637
- — —, crystalline, absorption spectrum, ultraviolet (LAVIN and STANLEY) 1937, 118, 269
- — —, —, isolation from tomato plants (LORING and STANLEY) 1937, 117, 733
- — —, —, preparation (STANLEY) 1936, 115, 673
- — —, hydrogen ion concentration stability (WYCKOFF) 1937-38, 122, 239
- — —, molecular sedimentation constants (WYCKOFF) 1937, 121, 219
- — —, nucleic acid (LORING) 1938, 123, lxxvi
- Seed, Connecticut shade-grown, lipids (SALISBURY) 1937, 117, 21
- Tocopherol(s): α -, vitamin E relation (EVANS, EMERSON, and EMERSON) 1936, 113, 319
- , wheat germ oil, isolation (EVANS, EMERSON, and EMERSON) 1936, 113, 319
- Chemistry (EMERSON, EMERSON, MOHAMMAD, and EVANS) 1937-38, 122, 99

- Toluene:** 2-Amino-5-azo-, liver tumors, relation (SHEAR) 1936, 114, xc
- Tomato:** American red and purple, pigment (MATLACK and SANDO) 1934, 104, 407
Plants, tobacco mosaic virus protein, crystalline, isolation from (LORING and STANLEY) 1937, 117, 733
- Tonometer:** Blood equilibration (IRVING and BLACK) 1937, 118, 337
- Tooth:** Composition (ARM-STRONG) 1935, 109, iv
Enamel, calcification variations (HOLLANDER, BODECKER, SAPER, and APPLEBAUM) 1934, 105, xl
—, candy, acidified, effect (WEST and JUDY) 1938, 123, cxxv
Fluoride feeding, effect (SMITH and LANTZ) 1933, 101, 677
Phosphatase, fluorine effect (SMITH and LANTZ) 1935-36, 112, 303
Phosphates, molecular constitution (HODGE, BALE, and LEFEVRE) 1937, 119, xlix
- Tosyl monoacetone l-rhamnose:** 5-, d-allomethylose synthesis, hydrolysis relation (LEVENE and COMPTON) 1936, 116, 169
- Transudate:** Calcium, diffusible, *in vivo* (MILLER) 1937-38, 122, 59
—, ionized, *in vivo* (MILLER) 1937-38, 122, 71
- Transudate—continued:**
Specific gravity and protein, relation (WEECH, REEVES, and GOETTSCH) 1936, 113, 167
- Traumatin:** Bean test, active principle (ENGLISH and BONNER) 1937, 121, 791
- Trehalose:** Isolation, timothy-grass bacillus (PANGBORN and ANDERSON) 1933, 101, 105
—, tubercle bacillus, human, acetone-soluble fat (ANDERSON and NEWMAN) 1933, 101, 499
- Triacetyl-d-galacturonide:** Cholesterol, sitosterol, and ergosterol, methyl esters, synthesis (SELL and LINK) 1938, 125, 235
- Triacetyl α -methyl-d-galacturonide:** 2,3,4-, methyl ester, catalytic reduction and deacetylation (LEVENE and CHRISTMAN) 1937-38, 122, 203
- Trianhydroperiplogenin:** (JACOBS and BIGELOW) 1933, 101, 697
Derivatives, ultraviolet absorption spectra (ELDERFIELD and ROTHEN) 1934, 106, 71
- Trianhydrostrophanthidin:** Derivatives, ultraviolet absorption spectra (ELDERFIELD and ROTHEN) 1934, 106, 71
- Tricarballic acid:** dl- α -Amino-, derivatives (GREENSTEIN) 1936, 116, 463

- Trichinosis:** Blood chemistry (PIERCE and HARTMAN) 1938, 123, xciv
- Trichogenesis:** Hypotrichosis, hereditary, sulfhydryl group action (MARTIN and GARDNER) 1935, 111, 193
- Trihalophenol:** Metabolism, effect, mechanism (CLOWES and KRAHL) 1936, 114, xix
- Trimethyl *l*-galactonic acid:** 3,4,5-, preparation (TIPSON) 1938, 125, 341
- Trimethyl α -methyl-*d*-galactoside:** 2,3,4-, 2,3,4-trimethyl α -methyl-*d*-galacturonide methyl ester conversion (LEVENE and KREIDER) 1937, 121, 155
- Trimethyl α -methyl-*d*-galacturonide:** 2,3,4-, methyl ester, catalytic reduction (LEVENE, TIPSON, and KREIDER) 1937-38, 122, 199
—, —, —, 2,3,4-trimethyl α -methyl-*d*-galactoside, conversion (LEVENE and KREIDER) 1937, 121, 155
- Triol:** Urine, adrenal tumor (BUTLER and MARRIAN) 1938, 124, 237
- Triose:** Liver glucose, relation (CORI and SHINE) 1936, 114, xxi
- Triticum vulgare:** *See* Wheat
- Trout:** Brook, calcium and phosphorus, factors affecting (McCAY, TUNISON, CROWELL, and PAUL) 1936, 114, 259
- Trypanosoma equiperdum:** Glucose metabolism (REINER, *continued:*
SMYTHE, and PEDLOW) 1936, 113, 75
- Trypanosoma lewisi:** Glucose metabolism (REINER, SMYTHE, and PEDLOW) 1936, 113, 75
- Trypsin:** Anti-, activity, egg white, nutritional disorder, relation (PARSONS) 1936, 116, 685
—, egg white (BALLS and SWENSON) 1934, 106, 409
- Canavalin, digestion effect (SUMNER and HOWELL) 1936, 113, 607
- Casein digestion, cystine liberation rate (JONES and GERSDORFF) 1936, 114, liii
—, —, vitamin B deficiency influence (SURE, KIK, and BUCHANAN) 1935, 108, 19
—, effect (TAUBER and KLEINER) 1934, 104, 271
- Chemical nature (KLEINER and TAUBER) 1934, 104, 267
- Chymo- (BERGMANN and FRUTON) 1938, 124, 321
—, substrates, synthetic (BERGMANN and FRUTON) 1937, 118, 405
- Differentiation, anaphylactic test (TEN BROECK) 1934, 106, 729
- Digestion, determination (JUKES) 1935, 109, xlvii
- Erepsin, protein digestion, study technique (SURE, KIK, and BUCHANAN) 1935, 108, 11
- Inactivation, protease (TAUBER and KLEINER) 1934, 105, 411

Trypsin—continued:

Pepsin and, digestion (TAUBER and KLEINER)

1934, 105, xc

Proteins derived by, arginase action (KRAUS-RAGINS)

1938, 123, 761

Test (SUMNER and HOWELL)

1935, 109, 429

Trypsinogen, enterokinase, system (BATES and KOCH)

1935, 111, 197

Urease inactivation, effect (SUMNER and DOUNCE)

1937, 117, 713

Yeast, determination (HECHT and CIVIN)

1936, 116, 477

Trypsinogen: Determination (BATES and KOCH)

1935, 111, 197

Tryptophane: Amino-N-methyl-, synthesis and configurational relationships (CAHILL and JACKSON)

1938, 123, xviii

d-Amino-N-methyl-, growth availability (GORDON)

1938, 123, xliii

dl-Amino-N-methyl-, growth availability (GORDON)

1938, 123, xliii

Carbonic acid derivatives, growth and kynurenic acid production, relation (BAUGUESS and BERG)

1936, 114, 253

Casein, determination (SULLIVAN, MILONE, and EVERITT)

1938, 125, 471

-Deficient diets, various indole acid supplements, growth effect (BAUGUESS and BERG)

1934, 104, 675

Tryptophane—continued:

Derivatives, kynurenic acid production (BAUGUESS and BERG)

1934, 105, viii

Determination (BATES)

1937, 119, vii

dl-, bile, administration effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

—, — and urine, kynurenic acid, administration effect (CORRELL, BERG, and COWAN)

1938, 123, 151

Egg albumin, crystalline, hydrolysis, liberation rate (CALVERY, BLOCK, and SCHOCK)

1936, 113, 21

l-, amides, growth effect (BAUGUESS and BERG)

1934, 106, 615

—, —, kynurenic acid production (BAUGUESS and BERG)

1934, 106, 615

—, bile, administration effect (CORRELL, BERG, and COWAN)

1935, 109, xxiv

—, — and urine, kynurenic acid, administration effect (CORRELL, BERG, and COWAN)

1938, 123, 151

—, ultraviolet absorption spectrum (FERAUD, DUNN, and KAPLAN)

1935-36, 112, 323

Metabolism (BAUGUESS and BERG)

1934, 104, 691

—, diphtheria bacillus (BAUGUESS)

1935, 109, v

Monomethyl-, metabolism (GORDON and JACKSON)

1935, 110, 151

Thyroglobulin, normal and

Tryptophane—continued:

goitrous (CAVETT)

1936, 114, 65

Utilization, growth and kyn-
urenic acid production, opti-
cal activity influence (BERG)

1934, 104, 373

—, subcutaneous injection ef-
fect (DU VIGNEAUD, SEA-
LOCK, and VAN ETTEEN)

1935-36, 112, 451

Tubercle bacillus: Avain, protein
fractions (MENZEL and
HEIDELBERGER)

1938, 124, 301

Bovine, protein fractions
(MENZEL and HEIDEL-
BERGER)

1938, 124, 301

—, wax phthiocerol (CASON
and ANDERSON)

1937, 119, 549

Human, anisic acid isolation,
acetone-soluble fat (ANDER-
SON and NEWMAN)

1933, 101, 773

—, lipids, bound (ANDERSON,
REEVES, and STODOLA)

1937, 121, 649

—, phosphatide (ANDERSON,
LOTHROP, and CREIGHTON)

1938, 125, 299

—, phthiocol (BALL)

1934, 106, 515

—, —, absorption spectrum
curve, ultraviolet (CROWE)

1936, 115, 479

—, —, chemical constitution
(ANDERSON and NEWMAN)

1933, 103, 197

—, —, synthesis (ANDERSON
and NEWMAN)

1933, 103, 405

Tubercle bacillus—continued:(NEWMAN, CROWDER, and
ANDERSON)

1934, 105, 279

Human, pigment isolation, ace-
tone-soluble fat (ANDERSON
and NEWMAN)

1933, 101, 773

—, protein (HEIDELBERGER
and MENZEL)

1934, 104, 655

—, Strain H-37, polysaccharides
(HEIDELBERGER and MEN-
ZEL)

1937, 118, 79

—, —, protein (MENZEL and
HEIDELBERGER)

1938, 124, 89

—, trehalose isolation, acetone-
soluble fat (ANDERSON and
NEWMAN)

1933, 101, 499

—, wax phthiocerol (STODOLA
and ANDERSON)

1936, 114, 467

(REEVES and ANDERSON)

1937, 119, 535

Lipids, chemistry (PANGBORN
and ANDERSON)

1933, 101, 105

(ANDERSON, CROWDER,
NEWMAN, and STODOLA)

1936, 113, 637

(CROWDER, STODOLA, and
ANDERSON)

1936, 114, 431

(CASON and ANDERSON)

1937, 119, 549

(ANDERSON, REEVES, and
CROWDER)

1937, 121, 669

Phthiocol, determination,
colorimetric (REEVES and
ANDERSON)

1937, 119, 543

Tubercle bacillus—continued:

Phthioic acid (SPIELMAN and ANDERSON)

1935-36, 112, 759

Tuberculostearic acid, constitution (SPIELMAN)

1934, 106, 87

See also Bacillus Calmette-Guérin

Tuberculin: Absorption spectrum (SPIEGEL-ADOLF and SEIBERT)

1934, 105, lxxxiii
1934, 106, 373

Active principle, chemical composition (SEIBERT and MUNDAY)

1933, 101, 763

Protein, acid-base-combining capacity (SEIBERT)

1936, 114, lxxxix

Tuberculostearic acid: Tubercle bacillus lipids (SPIELMAN)

1934, 106, 87

Tumor: Adrenal, urine compound, new (MARRIAN and BUTLER)

1937, 119, lxvi

—, — 3(α)-hydroxyetiocholan-17-one, 3(β)-hydroxyetioallocholan-17-one, and a triol, isolation (BUTLER and MARRIAN)

1938, 124, 237

Cells, swelling, *in vitro*, protein effect (SHEAR)

1934, 105, lxxix

Liver, 2-amino-5-azotoluene, relation (SHEAR)

1936, 114, xc

Mitochondria, vitamin A and (GOERNER and GOERNER)

1938, 123, 57

Mouse, titration (SHEAR)

1935, 109, lxxxi

Tumor—continued:

Phospholipid fatty acids, unsaturation degree (HAVEN)

1935, 109, xlii

— metabolism (HAVEN)

1936, 114, xlvii

1937, 118, 111

Tissue, cholesterol, ultraviolet light irradiation, effect

(KNUDSON, STURGES, and BRYAN)

1938, 123, lxx

—, vitamin C (MUSULIN, WOODWARD, SILVERBLATT, and KING)

1936, 114, lxxiv

Vitamin E relation (CARRUTHERS)

1938, 123, xix

Tungstate: Blood uric acid determination (NEWTON)

1937, 120, 315

Turkey: Eggs, chemistry (HEPBURN and MIRAGLIA)

1934, 105, xxxviii

Turtle: Blood (Vars)

1934, 105, 135

—, anoxia effect (JOHLIN and MORELAND)

1933, 103, 107

(MORELAND)

1937, 117, 471

Tyrosinase: Catechol oxidation product, relation (WAGREICH and NELSON)

1936, 115, 459

Determination (GRAUBARD and NELSON)

1935-36, 112, 135

Mono- and dihydric substrates, action (GRAUBARD and NELSON)

1935, 111, 757

Tyrosine: Absorption spectrum, ultraviolet (FERAUD, DUNN,

Tyrosine—continued:

- and KAPLAN)
1936, 114, 665
(HEIDT) 1936, 115, 223
3, 4-Dihydrophenylalanine-,
mixtures, components, de-
termination, colorimetric
(ARNOW) 1937, 118, 531
Diiodo-, absorption spectrum,
ultraviolet (HEIDT)
1936, 115, 223
—, peptone, myxedema-reliev-
ing artificial protein, relation
(SALTER and PEARSON)
1935-36, 112, 579
—, thyroid iodine and thyrox-
ine, administration effect
(FOSTER) 1934, 104, 497
dl-, metabolism (BUTTS, DUNN,
and HALLMAN)
1938, 123, 711
—, oxidation, liver and kidney
(BERNHEIM)
1935, 111, 217
Dopa formation from, ultra-
violet radiation (ARNOW)
1937, 120, 151
Egg albumin, crystalline, hy-
drolysis, liberation rate
(CALVERY, BLOCK, and
SCHOCK) 1936, 113, 21
Growth relation (WOMACK and
ROSE) 1934, 107, 449
l-, oxidation, liver and kidney
(BERNHEIM)
1935, 111, 217
—, ultraviolet absorption spec-
trum (FERAUD, DUNN, and
KAPLAN)
1935-36, 112, 323
Oxidation, livers and kidneys
(BERNHEIM and BERNHEIM)
1934, 107, 275

Tyrosine—continued:

- Peptides, physical constants
(GREENSTEIN)
1933, 101, 603
Protein hydrolysates, micro-
determination (BERNHART)
1938, 123, x
Thyroglobulin, normal and
goitrous (CAVETT)
1936, 114, 65

U

- Ulcer:** -Producing substance, gas-
tric, isolation from muscle
(TASHIRO)
1937, 119, xcvi
Ultrafiltration: Anaerobic (LA-
VIETES) 1937, 120, 267
Thermodynamics (FLEXNER)
1937, 121, 615
Ultraviolet: Light, cholesterol,
skin, blood, and tumor tis-
sue, effect (KNUDSON,
STURGES, and BRYAN)
1938, 123, lxx
Radiation, rickets, wave-length
effect (KNUDSON and BEN-
FORD) 1934, 105, xlviii
1938, 124, 287
Umbilical cord: Polysaccharide
acids, hydrolysis by pneu-
moccus autolytic enzyme
(MEYER, DUBOS, and
SMYTH) 1937, 118, 71
Polysaccharides (MEYER and
PALMER) 1936, 114, 689
Polyuronic acids (MEYER and
PALMER) 1936, 114, lxix
Undernutrition: Liver carbo-
hydrate storage, effect
(JOHNSTON and NEWBURGH)
1937, 119, liv

Undernutrition—continued:

Liver lipids, cholesterol-fed rats
(OKEY and GILLUM)

1935, 109, lxxii

Unsaponifiable material: Carbonyl compounds, isolation
(ANCHEL and SCHOENHEIMER) 1936, 114, 539

Uracil: Dibromoxyhydro-, alkali action (HEYROTH)
1936, 114, p. 1

Oxidation, *in vitro* (SCHWOB and CERECEDO)

1934, 105, lxxvi

1-*d*-Ribosido-, synthesis (HILBERT and RIST)

1937, 117, 371

Uranium: Nephritis, blood guanidine-like substance
(WEBER)

1938, 123, cxxiv

Poisoning, inulin and creatinine clearance, effect
(RICHARDS, WESTFALL, and BOTT) 1936, 116, 749

Urates: Blood, distribution (TALBOTT and SHERMAN)

1936, 115, 361

Urea: Aqueous humor, frog and higher animals (WALKER)

1933, 101, 269

Blood, determination, manometric (VAN SLYKE and KUGEL) 1933, 102, 489

—, frog and higher animals
(WALKER)

1933, 101, 269

— plasma cholesterol, ingestion effect (BRUGER and POIN-DEXTER) 1933, 101, 21

—, xylose tolerance, nephritis, comparison (LARSON)

1935, 109, lii

Urea—continued:

Cerebrospinal fluid, frog and higher animals (WALKER)

1933, 101, 269

Clearance, pregnancy (NICE)
1935, 109, lxix

Excretion, acidosis (ALVING and GORDON)

1937, 120, 103

Lymph, frog and higher animals (WALKER)

1933, 101, 269

Mammary gland, production
(GRAHAM, HOUGHIN, and TURNER) 1937, 120, 29

Microdetermination (BOR-SOOK) 1935, 110, 481

Nitrogen, blood, insulin effect
(POWERS and REIS)

1933, 101, 523

Precursor, kidney tissue
(KIRK) 1933, 102, 683

Solutions, hemoglobin and pepsin properties (STEINHARDT)

1938, 123, 543

—, — molecular weight and volume (HAND)

1935, 109, xl

-Splitting enzyme, gastric juice protein, relation (MARTIN)

1933, 102, 131

Thio-, cysteine, and corresponding disulfides, relations
(TOENNIES)

1937, 120, 297

Urease: Activity, buffer effect
(HOWELL and SUMNER)

1934, 104, 619

Arginine hydrolysis, metal ions and, effect (HELLERMAN and PERKINS)

1935-36, 112, 175

Urease—continued:

Crystalline, arginase, non-identity (SUMNER and DOUNCE)

1937, 119, xcvi

—, oxidation effect (PILLEMER, ECKER, MYERS, and MUNTWYLER) 1938, 123, 365

—, radiant energy effect (PILLEMER, ECKER, MYERS, and MUNTWYLER)

1938, 123, 365

Inactivation, trypsin effect (SUMNER and DOUNCE)

1937, 117, 713

Iodoacetate and iodoacetamide reaction (SMYTHE)

1936, 114, xcv, 601

Molecular weight (SUMNER, GRALÉN, and ERIKSSON-QUENSEL) 1938, 125, 37

Uremia: Blood serum proteolysis (MASON and EVERS)

1937, 119, 735

Uric acid: Aqueous humor, frog and higher animals (WALKER)

1933, 101, 269

Blood, determination (FOLIN)

1933, 101, 111

(NEWTON) 1937, 120, 315

—, frog and higher animals (WALKER)

1933, 101, 269

Cerebrospinal fluid, frog and higher animals (WALKER)

1933, 101, 269

Determination, photoelectric colorimeter (DILLER)

1937, 118, 161

—, turbidity cause (DILLER)

1937, 118, 161

Uric acid—continued:

Excretion, exercise effect (QUICK) 1935, 110, 107

—, glycine administration effect (MARTIN and CORLEY)

1934, 105, lvii

—, ketosis, lactic acid metabolism, and aromatic acids, relation (QUICK)

1934, 105, lxi

—, liver disease, benzoic acid influence (QUICK)

1935, 110, 107

—, purine-free and protein-free diets (MARTIN and CORLEY)

1934, 105, lvii

—, salicylic acid conjugation effect (QUICK)

1933, 101, 475

Lymph, frog and higher animals (WALKER)

1933, 101, 269

Microdetermination (BOR-SOOK) 1935, 110, 481

Reagent, preparation (FOLIN) 1934, 106, 311

Urine, determination (FOLIN) 1933, 101, 111

—, glomerulus, snake and frog (BORDLEY and RICHARDS)

1933, 101, 193

Uricase: Dogs (KLEMPERER, TRIMBLE, and HASTINGS)

1938, 125, 445

Uridine: Chemical constitution, N-methyl uridine, relation (LEVENE and TIPSON)

1934, 104, 385

Monotrityl, chemical constitution (LEVENE and TIPSON)

1934, 105, 419

Ring structure (LEVENE and TIPSON) 1933, 101, 529

Uridine 5-phosphoric acid: Synthesis (LEVENE and TIPSON)
1934, 106, 113

Urine: (*See note on p. 221*)

Acid-base equilibrium (SENDROY, SEELIG, and VAN SLYKE)
1934, 106, 479

—, ammonia secretion, nephritis, relation (BRIGGS)
1935, 109, xii

Acidity (MORGULIS)
1933, 103, 757

Acidosis-producing hormone, normal (FUNK)
1934, 105, xxix

Albuminous, chloride analysis, errors (SENDROY)
1937, 120, 441

Alkaline tide, gastric secretion, relation (HUBBARD, MUNFORD, and TYNER)
1933, 101, 781

Androgenic activity, acid hydrolysis effect (PETERSON, GALLAGHER, and KOCH)
1937, 119, 185, lxxvii

— material, inactive (McCULLAGH, OSBORN, and OSGARD)
1938, 123, lxxxi

Androgens, inactive, nature (PETERSON, HOSKINS, COFFMAN, and KOCH)
1938, 123, xciii

Ashing, thorium nitrate use (STRAUSS) 1937, 118, 331

Carbon dioxide tension (SENDROY, SEELIG, and VAN SLYKE) 1934, 106, 479

Compound, new, women with adrenal tumors (MARRIAN and BUTLER)
1937, 119, lxvi

Urine—*continued*:

Constituents, unidentified, buffer action (KUYPER)
1938, 123, 409

Cystinuria (STEKOL)
1934, 105, lxxxv

Depressor colloid, purification (BISCHOFF and ELLIOT)
1935, 109, 419

Estrogenic activity, acid hydrolysis effect (PETERSON, GALLAGHER, and KOCH)
1937, 119, 185

— diols, pregnant mares (WINTERSTEINER and HIRSCHMANN) 1937, 119, cvii

— — —, isolation (HIRSCHMANN and WINTERSTEINER)
1937-38, 122, 303

— substances, extraction, tungstic acid precipitation method (FREED, MIRSKY, and SOSKIN)
1935-36, 112, 143

— —, menstrual cycle, determination (GUSTAVSON, HAYS, and WOOD)
1937, 119, xlii

— —, normal females (GUSTAVSON and GREEN)
1934, 105, xxxiv

(GUSTAVSON, WOOD, and HAYS) 1936, 114, xlv

Estrogens (WILSON, STRICKLER, and McELLROY)
1938, 123, cxxix

Glomerulus (RICHARDS, BORDLEY, and WALKER)
1933, 101, 179

(HENDRIX, WESTFALL, and RICHARDS)
1936, 116, 735

—, chloride, frog and *Necturus*

Urine—continued:

- (WESTFALL, FINDLEY, and RICHARDS) 1934, 107, 661
- Glomerulus, creatinine, frog (BORDLEY, HENDRIX, and RICHARDS) 1933, 101, 255
- , hydrogen ion concentration determination, microquinhydrone electrode, *Necturus* (PIERCE and MONTGOMERY) 1935, 110, 763
- , inorganic phosphate, frog and *Necturus* (WALKER) 1933, 101, 239
- , reaction, frog and *Necturus* (MONTGOMERY) 1935, 110, 749
- , reducing substances, frog and *Necturus* (WALKER and REISINGER) 1933, 101, 223
- , uric acid, snake and frog (BORDLEY and RICHARDS) 1933, 101, 193
- Gonadotropic substance, castrates, female (LEVIN and TYNDALE) 1935, 109, liv
- Guanidine derivatives, muscle dystrophies (SULLIVAN, HESS, and IRREVERRE) 1936, 114, 633
- Guanidine-like substances, determination, colorimetric (ANDES and MYERS) 1937, 118, 137
- Henderson-Hasselbalch equation, application (SENDROY, SEELIG, and VAN SLYKE) 1934, 106, 463
- Hormones, female, properties (BOWMAN, VISSCHER, and MULL) 1935, 109, xi

Urine—continued:

- Hyperglycemic factor (HARROW, MAZUR, CHAMELIN, and LESUK) 1937, 119, xlv
- Ketose, normal (EVERETT, EDWARDS, and SHEPPARD) 1934, 104, 11
- Male hormone, bulls and rams (BUTZ and HALL) 1937, 119, xvi
- Menopause, follicle-stimulating hormone (BLOCK, BRAND, HARRIS, and HINSIE) 1936, 114, xii
- Muscle dystrophy, progressive (SULLIVAN and HESS) 1934, 105, lxxxix
- Oxygen tension and consumption (SENDROY) 1934, 105, lxxviii
- Pentose, hydrogen peroxide action (ENKLEWITZ) 1936, 116, 47
- origin (ENKLEWITZ and LASKER) 1935, 110, 443
- Phenolic substances (EDWARDS) 1936, 114, xxix
- Porphyrins, disease effect (DOBNER) 1936, 113, 1
- Pregnancy, equilin preparation (CARTLAND and MEYER) 1935-36, 112, 9
- , gonadotropic extracts, tungstic acid precipitation, preparation (KATZMAN and DOISY) 1934, 107, 513
- , — hormone (GURIN, BACHMAN, and WILSON) 1938, 123, xlix
- , pituitary-like hormone, anterior, separation (ELDEN) 1933, 101, 1

Urine—continued:

- Primates, nitrogen partition
(RHEINBERGER) 1936, 115, 343
- Proteins, dielectric constant
(FRIEND, FERRY, and ON-
CLEY) 1938, 123, xxxix
- Pyridine-like substances, de-
termination (VILTER, SPIES,
and MATHEWS) 1938, 125, 85
- Reducing substances, normal
(LAUG and NASH) 1935, 108, 479
- Sulfur distribution, cystinuria,
dog (GREEN, MORRIS, CA-
HILL, and BRAND) 1936, 114, 91
- Triol, adrenal tumor (BUTLER
and MARRIAN) 1938, 124, 237
- Urobilin: Crystalline, natural,
origin (WATSON) 1936, 114, 47
- Urochrome: (FLEMING and MAC-
ALLUM) 1935, 109, xxxiii
- Uronic acid(s): Aldoses, acet-
ylated, and, molecular rota-
tions, relation (GOEBEL and
REEVES) 1938, 124, 207
- Hexoses, conversion (LEVENE
and KREIDER) 1937, 121, 155
(LEVENE, TIPSON, and
KREIDER) 1937-38, 122, 199
(LEVENE and CHRISTMAN)
1937-38, 122, 203, 661
(LEVENE and TIPSON) 1938, 125, 345, 355
(LEVENE, MEYER, and
KUNA) 1938, 125, 703

Uronic acid(s)—continued:

- Methyl esters, glucose, gentio-
biose, and cellobiose acetyl
derivatives, molecular rota-
tions, relationship (GOEBEL
and REEVES) 1938, 123, xlii
- Microdetermination (BURK-
HART, BAUR, and LINK) 1934, 104, 171
- Poly-, vitreous humor and um-
bilical cord (MEYER and
PALMER) 1936, 114, lxix
- Ursolic acid: Esters, synthesis
(SELL and KREMERS) 1938, 125, 451
- Uterus: -Contracting substance,
seminal fluid (COCKRILL,
MILLER, and KURZROK) 1934, 105, xvi
- Infantile, estrogens, effect
(DORFMAN) 1937, 119, xxiv

V

- Vagina: Infantile, estrogens,
effect (DORFMAN) 1937, 119, xxiv
- Valeric acid: Glycogen forma-
tion, ingestion effect (ECK-
STEIN) 1933, 102, 591
- α -Hydroxy-*n*-, α -hydroxyiso-
valeric acid, configurational
relationship (BARTLETT,
KUNA, and LEVENE) 1937, 118, 503
- Valine: Absorption rate, gastro-
intestinal tract (CHASE and
LEWIS) 1934, 106, 315
- Isomers, absorption rate,
gastrointestinal tract (CHASE
and LEWIS) 1934, 106, 315

Valine—continued:

Metabolism (CARTER)
1935, 108, 619

Phenyl derivatives, synthesis
(CARTER) 1935, 108, 619

Vapor pressure: Blood, deter-
mination (CULBERT)
1935, 109, 547

— serum evaporation rate as
measure (CULBERT, Mc-
CUNE; and WEECH)
1937, 119, 589

Vegetable(s): Ascorbic acid oxi-
dase (KERTESZ, DEARBORN,
and MACK)

1936, 116, 717

Carbohydrate metabolism fac-
tor, boiling effect (WESSON)
1938, 123, cxv

Vitamin C (MACK and TRESS-
LER) 1937, 118, 735

Vegetable oils: Carotene sta-
bility (McDONALD)

1933, 103, 455

Encephalomalacia, nutritional,
chicks, effect (GOETTSCH and
PAPPENHEIMER)

1936, 114, 673

Venom: Toad, Chinese, ch'an
su (JENSEN and EVANS)

1934, 104, 307

Veratrine: Alkaloids (JACOBS and
CRAIG)

1937, 119, 141

1937, 120, 447

1938, 124, 659

1938, 125, 625

Vigna sinensis: See Pea

Vinyl ether: Tissues, human, iso-
lation (DOMANSKI)

1937, 119, 69

Viosterol: (MORGAN, KIMMEL,
THOMAS, and SAMISCH)

1934, 106, 531

Viosterol—continued:

Rickets, beryllium, rôle (So-
BEL, GOLDFARB, and KRA-
MER) 1935, 108, 395

Tissue effect (MORGAN and
SAMISCH) 1934, 105, lxiv
1935, 108, 741

See also Ergosterol

Virus: Aucuba mosaic protein,
ultracentrifugal analysis
(WYCKOFF)

1938, 124, 585

— —, tobacco mosaic protein,
crystalline, relation (STAN-
LEY) 1937, 117, 325

Mosaic, protein, latent, isola-
tion (LORING and WYCKOFF)
1937, 121, 225

Papilloma protein, hydrogen
ion concentration stability
(BEARD and WYCKOFF)

1938, 123, 461

Proteins, stream double refrac-
tion (LAUFFER and STANLEY)
1938, 123, 507

Tobacco mosaic, plants dis-
eased with, virus proteins,
crystalline, ultracentrifugal
analysis (WYCKOFF, BRISCOE,
and STANLEY)

1937, 117, 57

— — protein, activity and
yield (STANLEY)

1937, 121, 205

— — —, —, determination
(LORING) 1937, 121, 637

— — —, —, factors influencing
(STANLEY)

1937, 117, 755

— — —, crystalline, absorp-
tion spectrum, ultraviolet
(LAVIN and STANLEY)

1937, 118, 269

Virus—continued:

- Tobacco mosaic protein, crystalline, isolation from tomato plants (LORING and STANLEY) 1937, 117, 733
- — —, —, preparation (STANLEY) 1936, 115, 673
- — —, hydrogen ion concentration stability (WYCKOFF) 1937-38, 122, 239
- — —, molecular sedimentation constants (WYCKOFF) 1937, 121, 219
- — —, nucleic acid (LORING) 1938, 123, lxxvi
- Vitamin(s): A**, absorption and storage, rat (BAUMANN, RIISING, and STEENBOCK) 1934, 107, 705
- activity, alfalfa hay carotene, relation (HARTMAN, KANE, and SHINN) 1934, 105, xxxvi
- adsorption from oils, sodium and potassium soaps (BROCKLESBY and KUCHEL) 1938, 123, xvi
- , alcohol and ester, comparative value (EMMETT and BIRD) 1937, 119, xxxi
- , alfalfa, destruction, enzymatic, curing process (HAUGE) 1935, 108, 331
- , animal body, distribution (CLAUSEN and McCOORD) 1934, 105, xv
- avitaminosis, nerve degeneration, relation (SUTTON, SETTERFIELD, and KRAUSS) 1934, 105, lxxxix
- , blood serum and tissue

Vitamin(s)—continued:

- phosphatase, effect (CRIMM and STRAYER) 1935-36, 112, 511
- A, butter (BAUMANN and STEENBOCK) 1933, 101, 547
- , —, breed and diet, cows, influence (BAUMANN, STEENBOCK, BEESON, and RUPEL) 1934, 105, 167
- , — fat (SHREWSBURY and KRAYBILL) 1933, 101, 701
- , — —, determination (SHINN and CARY) 1936, 114, xcii
- , cod liver oil, nature (TISCHER) 1938, 125, 475
- , colostrum (SEMB, BAUMANN, and STEENBOCK) 1934, 107, 697
- deficiency, β -carotene absorption and utilization, jaundice and choledochocolostomy (GREAVES and SCHMIDT) 1934, 105, xxxi
- determination, photoelectric colorimeter (BILLS and WALLENMEYER) 1938, 123, xi
- (DANN and EVELYN) 1938, 123, xxvi
- , dihydro-, synthesis (GOULD) 1936, 114, xli
- , fishes (BILLS, McDONALD, MASSENGALE, IMBODEN, HALL, HERGERT, and WALLENMEYER) 1935, 109, vii
- , fruit, light effect (SMITH and MORGAN) 1933, 101, 43

Vitamin(s)—*continued*:

- A, halibut liver oil, potency, seasonal variation (BILLS, IMBODEN, and WALLENMEYER) 1934, 105, x
 —, — viscera oil (PUGSLEY) 1938, 123, xcvi
 —, mitochondria, dibenzanthracene effect (GOERNER) 1937-38, 122, 529
 — potency, carotene determinations, relation (SHINN, KANE, WISEMAN, and CARY) 1937, 119, lxxxix
 —, sable-fish viscera oil (PUGSLEY) 1938, 123, xcvi
 —, storage (CLAUSEN and MCCOORD) 1935, 109, xx
 —, synthesis, microorganisms (BAUMANN, STEENBOCK, INGRAHAM, and FRED) 1933, 103, 339
 —, tumor mitochondria and (GOERNER and GOERNER) 1938, 123, 57
 Antihemorrhagic (ALMQUIST) 1937, 120, 635
 —, properties (ALMQUIST) 1937, 117, 517 (KLOSE, ALMQUIST, and MECCHI) 1938, 125, 681
 —, purification (ALMQUIST) 1936, 114, 241 1936, 115, 589
 Antineuritic concentrate, preparation (STUART, BLOCK, and COWGILL) 1934, 105, 463
 Antiparalytic, chick (JUKES and BABCOCK) 1938, 123, lxv

Vitamin(s)—*continued*:

- B assay, technique (KNOTT and SCHLUTZ) 1937, 119, lviii
 — complex (SCHULTZ and MATTILL) 1937-38, 122, 183
 — —, anemia, nutritional, relation (KYER and BETHELL) 1935, 109, p. 1
 — —, chick dietary dermatitis preventive, feedingstuff, distribution (JUKES and LEPKOVSKY) 1936, 114, 117
 — —, — dermatitis preventive, properties (LEPKOVSKY and JUKES) 1936, 114, 109, lxi
 — —, deficiency disease, relation (HOGAN, RICHARDSON, and JOHNSON) 1937, 119, p. 1
 — —, fractionation, rice polishing (BOOHER and LOJIKIN) 1938, 123, xiv
 — —, third factor, multiple nature (LEPKOVSKY, JUKES, and KRAUSE) 1936, 115, 557
 — —, yeast, thermostability (SCHULTZ) 1937, 119, lxxxviii
 —, crystalline, yeast growth effect (WILLIAMS and SAUNDERS) 1934, 105, xcix
 — deficiency, casein tryptic and ereptic digestion, influence (SURE, KIK, and BUCHANAN) 1935, 108, 19
 — —, pancreas lipase and esterase, influence (SURE, KIK, and BUCHANAN) 1935, 108, 27

Vitamin(s)—continued:

- B extraction (ITTER, ORENT, and McCOLLUM)
1935, 108, 571
- , fat metabolism and (McHENRY and GAVIN)
1938, 125, 653
- , — sparing action (EVANS and LEPKOVSKY)
1934, 105, xxvii
1935, 108, 439
- growth-promoting factor, whole wheat (HALLIDAY)
1934, 106, 29
- loss, rat tissue (EVANS and LEPKOVSKY)
1935, 108, 439
- B-sparing action, fat, protein and vitamin G levels, influence (EVANS, LEPKOVSKY, and MURPHY)
1934, 107, 429
- —, fats, natural (EVANS, LEPKOVSKY, and MURPHY)
1934, 107, 439
- B synthesis, digestive tract, carbohydrate effect (GUERANT, DUTCHER, and TOMER)
1935, 110, 233
- , tissue, animal, fat sparing action (KEMMERER and STEENBOCK)
1933, 103, 353
- . *See also* Factor 1, Filtrate factor
- B₁, animal tissue (ELVEHJEM, SHERMAN, and ARNOLD)
1935, 109, xxix
- , biological assay (KNOTT and SCHLUTZ)
1936, 114, lix
- , cardiovascular diseases, re-

Vitamin(s)—continued:

- lation (SURE and JONES)
1937, 119, xcvi
- B₁, crystalline, effect (WATERMAN and AMMERMAN)
1934, 105, xcvi
- deficiency, pyruvic acid metabolism (LIPSCHITZ, POTTER, and ELVEHJEM)
1938, 123, 267
- determination, chemical (PREBLUDA and McCOLLUM)
1937, 119, lxxix
(MELNICK and FIELD)
1938, 123, lxxxiii
- —, polyneuritis as criterion (KLINE, TOLLE, and NELSON)
1938, 123, lxxix
- , enzyme reactions, interaction (TAUBER)
1938, 123, 499
- , extraction and stability (BISBEY and SHERMAN)
1935-36, 112, 415
- , fat metabolism, relation (WHIPPLE and CHURCH)
1935, 109, xcvi
- , growth composition, effect (WHIPPLE and CHURCH)
1936, 114, cvii
- , — requirement, diet fat relation (STIRN and ARNOLD)
1938, 123, cxvii
- , respiratory quotient, effect (WHIPPLE and CHURCH)
1937, 119, ciii
- , stability (KEENAN and KLINE)
1934, 105, xlv
- , urine, human, determination (HELMER)
1936, 114, xlviii
- . *See also* Thiamine

Vitamin(s)—*continued*:

- B₂ complex, fractionation
(HALLIDAY and EVANS) 1937, 118, 255
- deficiency, sulfhydryl group, rôle (ITTER, ORENT, and MCCOLLUM) 1935, 108, 585
- , flavins, non-identity (ELVEHJEM and KOEHN) 1935, 108, 709
- , stability (KEENAN and KLINE) 1934, 105, xlv
- , urine, human, determination (HELMER) 1936, 114, xlviii
- . *See also* Hepatoflavin, Lactoflavin, Riboflavin, Vitamin G
- B₄, stability (KEENAN and KLINE) 1934, 105, xlv
- B₆ deficiency, dietary oils, effect (SALMON) 1938, 123, civ
- —, tissue metabolism, effect (MUUS, BESSEY, and HASTINGS) 1937, 119, lxxii
- , fatty acid factor, unsaturated, relation (BIRCH) 1938, 124, 775
- preparation (EMERSON, MOHAMMAD, EMERSON, and EVANS) 1938, 124, 377
- C, adrenals, distribution (GLICK and BISKIND) 1935, 110, 1
- , —, —, development relation (GLICK and BISKIND) 1936, 115, 551
- , —, temperature and post-mortem effect (PETERS and MARTIN) 1938, 124, 249
- , body, fluorosis, influence

Vitamin(s)—*continued*:

- (PHILLIPS and CHANG) 1934, 105, 405
- C, corpus luteum, estrous cycle and pregnancy, relation (BISKIND and GLICK) 1936, 113, 27
- determination (TAUBER and KLEINER) 1935, 108, 563
- , — as furfural from dehydroascorbic acid derivative (ROE) 1938, 123, ciii
- , —, chemical (GLICK) 1935, 109, 433
- , —, enzymic (TAUBER and KLEINER) 1935, 110, 559
- , diphtheria toxin effect (TORRANCE) 1937, 121, 31
- , extraction and titration, metaphosphoric acid reagent (MUSULIN and KING) 1936, 116, 409
- , fluorine-fed cows, tissues, distribution (PHILLIPS and STARE) 1934, 104, 351
- , glucose tolerance, relation (SIGAL and KING) 1936, 116, 489
- , guinea pig, effect (SVIRBELY) 1936, 116, 543
- , hypophysis cerebri, distribution (GLICK and BISKIND) 1935, 110, 583
- , orange juice (JOSLYN, MARSH, and MORGAN) 1934, 105, 17
- , organs, ascorbic acid administration with thyroid, α -dinitrophenol, and cortical hormone extract, effect (SVIRBELY) 1935, 111, 147

Vitamin(s)—continued:

- C, rat, effect (SVIRBELY)
1936, 116, 543
- , small intestine, distribution
(GLICK and BISKIND)
1936, 113, 427
- , thymus, histological
changes, relation (GLICK and
BISKIND) 1936, 114, 1
- , tissues (TAUBER and
KLEINER) 1935, 108, 563
- , —, determination and dis-
tribution (BESSEY and KING)
1933, 103, 687
- , —, human (YAVORSKY,
ALMADEN, and KING)
1934, 106, 525
- , tumor tissue (MUSULIN,
WOODWARD, SILVERBLATT,
and KING)
1936, 114, lxxiv
- , vegetables (KERTESZ,
DEARBORN, and MACK)
1936, 116, 717
(MACK and TRESSLER)
1937, 118, 735
- , *See also* Ascorbic acid
- D, absorption and excretion,
bile effect (HEYMANN)
1937-38, 122, 249
- , —, bile rôle (GREAVES and
SCHMIDT) 1933, 102, 101
- , —, excretion, and action
(HEYMANN)
1937, 119, xlviii
- , blood serum and tissue
phosphatase, effect (CRIMM
and STRAYER)
1935-36, 112, 511
- , calcium retention, infancy,
effect (STEARNS and JEANS)
1936, 114, c

Vitamin(s)—continued:

- D-containing materials, ster-
ols, separation (NATELSON
and SOBEL)
1935, 109, 687
- D, excretion, intestine (HEY-
MANN) 1937-38, 122, 257
- , fishes (BILLS, McDONALD,
MASSENGALE, IMBODEN,
HALL, HERGERT, and WAL-
LENMEYER)
1935, 109, vii
- , formation, cathode rays,
effect (HOFFMAN and
DANIELS) 1936, 115, 119
- , halibut liver oil, potency,
seasonal variation (BILLS,
IMBODEN, and WALLEN-
MEYER) 1934, 105, x
- , — viscera oil (PUGSLEY)
1938, 123, xcvi
- , milk constituents and, rela-
tion (SUPPLEE, ANSBACHER,
BENDER, and FLANIGAN)
1936, 114, 95
- , nature, multiple (Mc-
DONALD) 1936, 114, lxxv
- , new, cod liver oil (BILLS,
MASSENGALE, HICKMAN, and
GRAY) 1938, 123, x
- , parathyroid action, rela-
tion (JONES)
1935, 109, xli
1935, 111, 155
- , potency, irradiated milk,
energy input relation
(O'BRIEN, McEWEN, and
MORGAREIDGE)
1937, 119, lxxiii
- , sable-fish viscera oil (PUGS-
LEY) 1938, 123, xcvi
- , skin respiration, relation
(PRESNELL) 1937, 121, 5

Vitamin(s)—*continued*:

- D, storage, tissues (HEYMANN)
1937, 118, 371
- , various sources, antirachitic effectiveness (HAMAN and STEENBOCK)
1936, 114, 505
- D₂, phosphorus-low diets, effect (SCHNEIDER and STEENBOCK)
1938, 123, cv
- Deficiency, liver lipids, cholesterol-fed rats (OKEY and GILLUM) 1935, 109, lxxii
- Dihydro-, A, synthesis (GOULD) 1936, 114, xli
- E, chemical constitution and absorption spectrum (OLCOTT) 1935, 110, 695
- , — properties (OLCOTT)
1934, 105, lxxv
- , chemistry (EMERSON, EMERSON, MOHAMMAD, and EVANS) 1937–38, 122, 99
- , concentrates, preparation and properties (EVANS, MURPHY, ARCHIBALD, and CORNISH) 1935, 108, 515
- , —, stability (OLCOTT)
1934, 107, 471
- E-deficient rats, paralysis in young from (OLCOTT)
1937, 119, lxxiv
- E, esters, utilization (OLCOTT)
1935, 110, 695
- , growth, relation (OLCOTT and MATTILL)
1936, 114, lxxvii
- , properties (OLCOTT and MATTILL) 1934, 104, 423 (OLCOTT) 1935, 109, lxxii
- , α -tocopherol relation

Vitamin(s)—*continued*:

- (EVANS, EMERSON, and EMERSON)
1936, 113, 319
- E, tumors, relation (CARRUTHERS) 1938, 123, xix
- , wheat germ and wheat germ oil, biological assay (PALMER) 1937, 119, lxxv
- Fat-soluble (BAUMANN and STEENBOCK)
1933, 101, 561
- Free diets, lactoflavin in (SUPPLEE, FLANIGAN, HANFORD, and ANSBACHER)
1936, 113, 787
- G, chick requirements (LEPKOVSKY and JUKES)
1935, 111, 119
- complex, dermatitis, rat, and pellagra, human, relation (DANN)
1936, 114, xxiv
- —, fractionation (LEPKOVSKY and JUKES)
1937, 119, lx
- , concentrates, growth-promoting properties (BOOHER, BLODGETT, and PAGE)
1934, 107, 599
- , concentration (BOOHER)
1933, 102, 39
1934, 105, xii
1934, 107, 591
- (LEPKOVSKY, POPPER, and EVANS) 1935, 108, 257
- , crystalline, preparation (LEPKOVSKY, POPPER, and EVANS) 1935, 109, liv
- deficiency, rat skin oxygen uptake and composition, relation (ADAMS)
1936, 116, 641

Vitamin(s)—*continued*:

- G-deficient diet, cataract from,
blood sugar, relation (DAY)
1935, 109, xxvi
- G, liver (BLOCK and FAR-
QUHAR) 1933, 103, 643
- , nature (BOOHER)
1933, 102, 39
1934, 105, xii
1934, 107, 591
- , photochemical phenomena
(SUPPLEE, ANSBACHER, and
BENDER) 1935, 110, 365
- requirement (SHERMAN and
ELLIS) 1934, 104, 91
- G-sparing action, fat (EVANS,
LEPKOVSKY, and MURPHY)
1934, 107, 443
- G, vitamin B-sparing action,
fat and, influence (EVANS,
LEPKOVSKY, and MURPHY)
1934, 107, 429
- , yeast (BLOCK and FAR-
QUHAR) 1933, 103, 643
- , *See also* Antidermatitis,
Vitamin B₂
- H, concentration and proper-
ties (BOOHER)
1936, 114, xiv
1937, 119, 223
- , isolation (GYÖRGY)
1937, 119, xliii
- K, assay, biological (THAYER,
MACCORQUODALE, MCKEE,
and DOIRY)
1938, 123, cxx
- , properties (KLOSE, ALM-
QUIST, and MECCHI)
1938, 125, 681
- Pro-, D, cholesterol (WAD-
DELL) 1934, 105, 711
- , —, ergosterol, crude (BILLS,

Vitamin(s)—*continued*:

- MASSENGALE, McDONALD,
and WIRICK)
1935, 108, 323
- Pro-, D, heat-treated choles-
terol (HATHAWAY and LOBB)
1936, 113, 105
- , —, plant and animal
(BETHKE, RECORD, and
WILDER)
1935-36, 112, 231
- , —, potency and properties,
heat-treated cholesterol
(HATHAWAY and KOCH)
1935, 108, 773
- , —, sterol derivatives, po-
tency (KOCH and KOCH)
1936, 116, 757
- Water-soluble, vitamin B com-
plex-related, chick dietary
dermatitis preventive, feed-
ingstuff, distribution (JUKES
and LEPKOVSKY)
1936, 114, 117
- , — — —, chick dietary der-
matitis preventive, proper-
ties (LEPKOVSKY and JUKES)
1936, 114, 109
- See also* Avitaminosis, Factor
W, Hypervitaminosis
- Vitellinic acid**: Serinephosphoric
acid formation from hydroly-
sis of (LEVENE and SCHOR-
MÜLLER) 1933, 103, 537
- Vitreous humor**: Calcium (SALIT)
1934, 104, 275
- Polysaccharide (MEYER and
PALMER) 1934, 107, 629
- acids, hydrolysis by pneu-
mococcus autolytic enzyme
(MEYER, DUBOS, and
SMYTH) 1937, 118, 71

Vitreous humor—continued:

- Polysaccharides (MEYER and PALMER) 1936, 114, 689
 Polyuronic acids (MEYER and PALMER) 1936, 114, lxi

W

Walden inversion: (LEVENE and ROTHEN) 1934, 107, 533

- Substitution reaction and, mechanism (LEVENE, ROTHEN, and KUNA) 1937, 120, 777
 1937, 121, 747

Water: Alkaline and saline, mineral balance and excretion paths, effect (HELLER and HADDAD) 1936, 113, 439

- Blood and muscle, distribution, adrenalectomy effect (HEGNAUER and ROBINSON) 1936, 116, 769

— — —, exchange (EICHELBERGER) 1937–38, 122, 323

— — —, —, body water effect (HASTINGS and EICHELBERGER) 1937, 117, 73

— — —, —, dehydration effect (EICHELBERGER and HASTINGS) 1937, 118, 205

— — —, —, hydronephrosis effect (EICHELBERGER) 1937, 119, xxx

— — —, —, respiratory alkalosis and acidosis, effect (EICHELBERGER and HASTINGS) 1937, 118, 197

— — —, salt and, exchange (HASTINGS and EICHELBERGER) 1935, 109, xli

— cells (EISENMAN, MACKEN-

Water—continued:

ZIE, and PETERS) 1936, 116, 33

Blood, distribution, glucose intraperitoneal injection effect (ROBINSON and HEGNAUER) 1936, 116, 779

—, —, pregnancy (OBERST and PLASS) 1935, 109, lxxi

— plasma cholesterol, ingestion effect (BRUGER and POIN-DEXTER) 1933, 101, 21

— serum (EISENMAN, MACKENZIE, and PETERS) 1936, 116, 33

— —, solute molality and specific gravity, relation (SUNDERMAN) 1936, 113, 111

Body, blood and muscle salt and water exchange, effect (HASTINGS and EICHELBERGER) 1937, 117, 73

—, distribution, body electrolytes and, relation (HARRISON, DARROW, and YANNET) 1936, 113, 515

—, nephrectomy effect (CHANUTIN) 1938, 123, xx

Brain, liver, and muscle, electrolytes and, growth effect (YANNET and DARROW) 1938, 123, 295

Extracellular and intracellular, bone and cartilage (IOB and SWANSON) 1937–38, 122, 485

Heavy, amylase formation, barley, influence (CALDWELL and DOEBBELING) 1936, 114, xvii

—, peptides, proteolytic enzymes, action (FOSTER, KES-

Water—continued:

- TON, RITTENBERG, and
SCHOENHEIMER) 1938, 124, 159
- Heavy, yeast alcohol formation,
effect (EVANS and RITTEN-
BERG) 1937, 119, xxxi
- Liver, glycogen, fat, and pro-
tein, relation (KAPLAN and
CHAIKOFF) 1936, 116, 663
- Metabolism, sodium, potas-
sium, and ammonium chlo-
rides and sodium bicarbo-
nate, ingestion effect
(WILEY, WILEY, and WAL-
LER) 1933, 101, 73
- Phenol-contaminated, effect
(HELLER and PURSELL)
1937, 119, xlvi
- Sea, cresol red dissociation con-
stant (MITCHELL and TAY-
LOR) 1934, 105, lxii
- Storage, liver, glycogen, rela-
tion (MACKEY and BERG-
MAN) 1934, 105, 59
- Wax(es):** Coating, pear (MARK-
LEY, HENDRICKS, and
SANDO) 1935, 111, 133
- Like constituents, cherry cu-
ticle (MARKLEY and SANDO)
1937, 119, 641
- —, grapefruit peel oil
(MARKLEY, NELSON, and
SHERMAN) 1937, 118, 433
- Slash-pine growing tips (HALL
and GISVOLD) 1936, 113, 487
- Tubercle bacillus, bovine,
phthiocerol in (CASON and
ANDERSON) 1937, 119, 549
- —, human, phthiocerol in
(STODOLA and ANDERSON)
1936, 114, 467
- (REEVES and ANDERSON)
1937, 119, 535
- Wharton jelly:** Lipid (BOYD)
1935, 111, 667
- Wheat:** Amino acids (CSONKA)
1937, 118, 147
- Germ, vitamin E assay (PAL-
MER) 1937, 119, lxxv
- Straw, lignin (PHILLIPS and
Goss) 1938, 125, 241
- Whole, hemoglobin regenera-
tion influence (ROSE, VAHL-
TEICH, and MACLEOD)
1934, 104, 217
- , vitamin B growth-promot-
ing factor (HALLIDAY)
1934, 106, 29
- Wheat germ oil:** Growth defi-
ciency disease, effect (BLUM-
BERG) 1935, 108, 227
- α -Tocopherol isolation (EVANS,
EMERSON, and EMERSON)
1936, 113, 319
- Vitamin E assay (PALMER)
1937, 119, lxxv
- Wood:** Mesquite, hemicellulose
(SANDS and NUTTER)
1935, 110, 17
- Pectic substances, isolation
(ANDERSON)
1935-36, 112, 531
- (ANDERSON, SEIGLE, KRZNA-
RICH, RICHARDS, and MAR-
TENY) 1937, 121, 165
- Tissue, apple tree, starch poly-
saccharides, isolation and
properties (NIEMANN, ROB-
ERTS, and LINK)
1935, 110, 727

Woodchuck: Urine nitrogen partition (CARPENTER)

1937-38, 122, 343

Wool: Enzyme digestion (ROUTH and LEWIS) 1938, 124, 725

— hydrolysis (ROUTH) 1938, 123, civ

Hydrolysates, cystine isolation (TOENNIES and BENNETT)

1935-36, 112, 39

Hydrolysis, cystine isolation (TOENNIES and BENNETT)

1934, 105, xcii

Lamb, ration effect (SULLIVAN, HESS, HARDY, and HOWE)

1935, 109, xc

Work: Blood acid-base, effect (HASTINGS, DILL, and EDWARDS) 1936, 114, xlvii

— lactic acid, high altitudes, influence (EDWARDS)

1936, 114, xxx

— plasma colloids, effect (KEYS and TAYLOR)

1935, 109, 55

See also Exercise, Fatigue

Wound: Hormone, plant (ENGLISH and BONNER)

1937, 121, 791

X

Xanthin: Eschscholtz-, poppy, California, petals (STRAIN)

1938, 123, 425

Xanthine: Oxidase, liver, *p*-aminophenol action (BERNHEIM and BERNHEIM)

1938, 123, 307

Xanthophyll: Determination (CLAUSEN and McCOORD)

1936, 113, 89

Poppy, California, petals (STRAIN) 1938, 123, 425

Xenopus laevis: *See* Toad

X-ray: *See* Roentgen ray

Xyloketose: *d*-, monoacetone (LEVENE and TIPSON)

1934, 106, 603

l-, hydrogen peroxide action (ENKLEWITZ)

1936, 116, 47

—, urine, detection and determination (LASKER and ENKLEWITZ) 1933, 101, 289

—, —, origin (ENKLEWITZ and LASKER) 1935, 110, 443

Xylomethylose: *d*-, and derivatives (LEVENE and COMPTON) 1935, 111, 325

—, chemical constitution (LEVENE and COMPTON)

1935-36, 112, 775

Xylose: *d*-, metabolism (BLATHERWICK, BRADSHAW, CULLIMORE, EWING, LARSON, and SAWYER)

1936, 113, 405

3-Methyl (LEVENE and RAYMOND) 1933, 102, 331

5-Methyl (LEVENE and RAYMOND) 1933, 102, 331

— monoacetone, phosphoric esters, pentose, yeast nucleic acid, relation (LEVENE and RAYMOND)

1933, 102, 347

Monoacetone, derivatives (LEVENE and RAYMOND)

1933, 102, 317

Phosphoric esters, pentose, yeast nucleic acid, relation (LEVENE and RAYMOND)

1933, 102, 347

Tolerance, blood urea, nephritis, comparison (LARSON) 1935, 109, lii

Xylosephosphoric acids: (LEVENE and RAYMOND)

1934, 107, 75

Xylulose: *d*-, metabolism (LARSON, BLATHERWICK, BRADSHAW, EWING, and SAWYER)

1937, 117, 719

—, monoacetone, structure (LEVENE and TIPSON)

1937, 120, 607

l-, metabolism (LARSON, BLATHERWICK, BRADSHAW, EWING, and SAWYER)

1938, 123, lxxiii

Preparation (LEVENE and TIPSON)

1936, 115, 731

Y

Yeast: Adenylic acid, acridine salts (TIPSON)

1937, 120, 621

— —, ribosephosphoric acid from (LEVENE and HARRIS)

1933, 101, 419

Alcohol extract, growth relation (RYMER and LEWIS)

1936, 114, 361

— formation, heavy water effect (EVANS and RITTENBERG)

1937, 119, xxxi

Blood sugar, fermentable, determination, gasometric (HOLDEN)

1937, 119, 347

Cephalin (SALISBURY and ANDERSON)

1935-36, 112, 541

Cytochrome, spectrograph, temperature effect (URBAN)

1935, 109, xciii

Dietary factor, essential (ELVEHJEM, KOEHN, and OLESON)

1936, 114, xxxi

Yeast—continued:

Dietary, liver total fatty acid and cholesterol, nephrectomy, effect (HORTENSTINE, CHANUTIN, and LUDEWIG)

1938, 125, 455

Extract, fermentation and respiration, dyestuffs, effect (MICHAELIS and SMYTHE)

1936, 113, 717

—, glucosemonophosphate and glycerophosphate calcium salt, isolation (SMYTHE)

1937, 117, 135

—, glucose-1-phosphoric acid formation (CORI, COLOWICK, and CORI)

1938, 123, 375

—, hexosemonophosphate from (MICHAELIS and SMYTHE)

1936, 114, lxx

(SMYTHE) 1937, 118, 619

Fat, acetone-soluble (NEWMAN and ANDERSON)

1933, 102, 219

Fermentation, carbon dioxide determination, apparatus (FRANKE and MOXON)

1934, 105, 415

—, iodoacetic acid inhibition, sulphydryl relation (SCHROEDER, WOODWARD, and PLATT)

1933, 101, 133

Galac, preparation (KIRBY and ATKIN)

1936, 116, 511

Growth, inositol, crystalline vitamin B, and pantothenic acid, effect (WILLIAMS and SAUNDERS)

1934, 105, xcix

—, pantothenic acid effect (RICHARDS)

1936, 113, 531

Yeast—continued:

- Histidine determination, Kappeller-Adler method (WOOLLEY and PETERSON) 1937-38, 122, 207
- Invertase activity, protein influence (SAUL and NELSON) 1935, 111, 95
- , preparation (LUTZ and NELSON) 1934, 107, 169
- Lecithin (SALISBURY and ANDERSON) 1935-36, 112, 541
- Maltose fermentation, activators (BLISH and SANDSTEDT) 1937, 118, 765
- Nucleic acid, decomposition, enzymatic (DUBOS and THOMPSON) 1938, 124, 501
- —, pentose, xylose and 5-methyl monoacetone xylose phosphoric esters, relation (LEVENE and RAYMOND) 1933, 102, 347
- Pepsin, determination (HECHT and CIVIN) 1936, 116, 477
- Phospholipids (NEWMAN and ANDERSON) 1933, 102, 229
- Preparations, iodoacetate and iodoacetamide reaction (SMYTHE) 1936, 114, 601
- Proteins (CSONKA) 1934, 105, xix
1935, 109, 703
- Pyruvic acid utilization (SMYTHE) 1938, 123, cxi
1938, 125, 635
- Trypsin, determination (HECHT and CIVIN) 1936, 116, 477

Yeast—continued:

- Vitamin B complex, thermostability (SCHULTZ) 1937, 119, lxxxviii
- G (BLOCK and FARQUHAR) 1933, 103, 643
- Zymin, carbon dioxide production, electrolyte effect (STAVELY, CHRISTENSEN, and FULMER) 1935, 111, 771
- , — — —, ethanol effect (STAVELY, CHRISTENSEN, and FULMER) 1935, 111, 785
- , fermentation, phosphate content, electrolytes and ethanol, effect (STAVELY, CHRISTENSEN, and FULMER) 1935, 111, 791

Z

- Zein:** Amphoteric properties (COHN, EDSALL, and BLANCHARD) 1934, 105, 319
- Arsanilic acid and (BOYD and HOOKER) 1934, 104, 329
- White, yellow corn, preparation (MASON and PALMER) 1934, 107, 131
- Zinc:** Biological material, determination (SAHYUN and FELDKAMP) 1936, 116, 555
- Insulin action, effect (SCOTT and FISHER) 1936, 114, lxxxviii
- Nutrition (STIRN, ELVEHJEM, and HART) 1935, 109, 347
- Plant tissue, histochemical analysis (REED and DUFRENOY) 1934, 105, lxx

Zinc chloride: Amino acids, reaction (JOSEPH)

1935, 111, 479

Zinc hydroxide: Blood filtrates, protein-free, preparation (LETONOFF)

1934, 106, 693

Zwitter ions: Activity coefficients and reaction rate, systems containing (STRAUP-COPE and COHN)

1934, 105, lxxxvii

— — in systems containing (JOSEPH) 1934, 105, xliii

Zymin: Yeast, carbon dioxide production, electrolyte effect (STAVELY, CHRISTENSEN, and FULMER)

1935, 111, 771

—, — — —, ethanol effect (STAVELY, CHRISTENSEN, and FULMER)

1935, 111, 785

—, fermentation, phosphate content, electrolyte and ethanol effect (STAVELY, CHRISTENSEN, and FULMER)

1935, 111, 791

16840



IARI

THE JOURNAL OF BIOLOGICAL CHEMISTRY

FOUNDED BY CHRISTIAN A. HERTER AND SUSTAINED IN PART BY THE CHRISTIAN A. HERTER
MEMORIAL FUND

EDITED FOR THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS

EDITORIAL BOARD

RUDOLPH J. ANDERSON
W. MANSFIELD CLARK
HANS T. CLARKE
CARL F. CORI
EDWARD A. DOISY
A. BAIRD HASTINGS

HOWARD B. LEWIS
ELMER V. McCOLLUM
WILLIAM C. ROSE
WILLIAM C. STADIE
DONALD D. VAN SLYKE
HUBERT B. VICKERY

INDEX VOLUMES 126-150 1938-1943

COMPILED BY
ISAAC NEUWIRTH

333407



NEW HAVEN

1947

Made in the United States of America

COPYRIGHT, 1947
BY
THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, INC.

PUBLISHED AT YALE UNIVERSITY FOR
THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, INC.
WAVERLY PRESS, INC.
BALTIMORE, U. S. A.

AUTHOR INDEX

A

- Abbott Lynn DeForrest, Jr., and Lewis, Howard B. Comparative studies of the metabolism of the amino acids. VIII. Glycine precursors. Availability of N-methylglycine, N,N-dimethylglycine, and betaine for the synthesis of hippuric acid by the rabbit, 131, 479
- and —. IX. Glycine precursors. Availability of N-ethylglycine and glycolic acid for the synthesis of hippuric acid by the rabbit, 137, 535
- . Availability of formylglycine, acetyl-glycine, and propionylglycine for the synthesis of hippuric acid by the rabbit, 145, 241
- and Salmon, C. Lester, Jr. Experimental alkaptonuria in the white rat on high tyrosine diets, 150, 339
- Abbott, William E. See *Mellors, Muntwyler, Mautz, and Abbott*, 144, 785
- Abramowitz, A. A. Purification of the chromatophorotropic hormone of the crustacean eyestalk, 132, 501
- Abrams, Richard. See *Altschul, Abrams, and Hogness*, 130, 427
- 136, 777
- , Altschul, A. M., and Hogness, T. R. Cytochrome *c* peroxidase. II. The peroxidase-hydrogen peroxide complex, 142, 303
- Abramson, Harold A., and Moore, Dan H. Note on electrophoretic patterns following aeration of ragweed pollen extract, 144, 579
- Adams, Mark H., Reeves, Richard E., and Goebel, Walther F. The synthesis of 2,4-dimethyl- β -methylglucoside, 140, 653
- . See *Hogeboom and Adams*, 145, 273
- . See *Goebel, Shedlovsky, Larin, and Adams*, 148, 1
- Addis, T. See *Poo, Lew, and Addis*, 128, 69
- Adlersberg, David, and Ellenberg, Max. Effect of carbohydrate and fat in the diet on uric acid excretion, 128, 379
- Adolph, William H., and Liang, Chih-Chuan. Calcium in the alimentary tract of the rat, 137, 517
- and —. The fate of oxalic acid administered to the rat, 146, 497
- Ågren, Gunnar, Hammarsten, Einar, and Rosdahl, Karl Gustaf. The disappearance of amino nitrogen from cell-free liver extracts. II, 127, 541
- Albanese, Anthony A. An electrolytic method for the determination of the basic amino acids in proteins, 134, 467
- and Frankston, Jane E. A new color test for tryptophane in protein hydrolysates, 144, 563
- , Holt, L. Emmett, Jr., Kajdi, Charlotte N., and Frankston, Jane E. Observations on tryptophane deficiency in rats. Chemical and morphological changes in the blood, 148, 299
- Albaum, H. G., and Worley, L. G. The development of cytochrome oxidase in the chick embryo, 144, 697
- . See *DuBois, Albaum, and Potter*, 147, 699
- Albaum, Harry G., and Cohen, Philip P. Transamination and protein synthesis in germinating oat seedlings, 149, 19
- Alburn, Harvey E., and Myers, Victor C. The creatine, phosphorus, and collagen content of different sections of the dog heart, 131, 713
- Alexander, Benjamin, and Subbarow, Yellapragada. A new bios factor in liver extract, 135, 341
- and Levi, J. Elliot. A simple method for the chemical determination of urinary thiamine based upon the Prebluda-McCollum reaction, 146, 399
- Allen, Della. See *Collier and Allen*, 140, 675

- Allen, Frank Worthington, and Eiler, John J. The action of crystalline ribonuclease on ribonucleic acid, 137, 757
- See *Bolomey and Allen*, 144, 113
- Allen, Thomas Hunter, Boyd, G. E., and Bodine, Joseph Hall. Enzymes in ontogenesis (Orthoptera). XXI. Unimolecular films and fractions of protyrosinase activators from grasshopper egg oil, 143, 785
- Allen, Willard M., and Viergiver, Ellenmae. A titrimetric method for the determination of sodium pregnanediol glucuronidate in the urine of pregnant women, 141, 837
- See *Woolf, Viergiver, and Allen*, 146, 323
- Alles, Gordon A., and Hawes, Roland C. Cholinesterases in the blood of man, 133, 375
- , Blohm, Clyde L., and Saunders, Paul R. Tyrosinase and phenolic pressor amines, 144, 757
- and Heegaard, Erik V. Substrate specificity of amine oxidase, 147, 487
- See *Heegaard and Alles*, 147, 505
- Allinson, M. J. Carl. See *Miller, Allinson, and Baker*, 130, 383
- A specific enzymatic method for the determination of nicotinic acid in blood, 147, 785
- Allison, Franklin E. See *Hoover and Allison*, 134, 181
- Allison, James B., and Cole, William H. The nitrogen, copper, and hemocyanin content of the sera of several arthropods, 135, 259
- , —, Leathem, James H., Nastuk, William L., and Anderson, John A. Acidosis and decreased urine flow in the rabbit during gravity shock, 147, 255
- Almquist, H. J., and Mecchi, E. The influence of bile on erosions of the chick gizzard lining, 126, 407
- and Klose, A. A. Antihemorrhagic activity of 2-methyl-1,4-naphthoquinone, 130, 787
- and —. A derivative of vitamin K₁, 130, 791
- Almquist, H. J.—continued:
- See *Klose and Almquist*, 132, 469
- , Stokstad, E. L. R., Mecchi, E., and Manning, P. D. V. Identification of the rice factor, 134, 213
- , Mecchi, E., Stokstad, E. L. R., and Manning, P. D. V. Identification of the rice factor. The carbohydrate component, 134, 465
- See *Klose and Almquist*, 135, 153
- and Mecchi, E. Identification of the rice factor. The essential nature of the glycine component, 135, 355
- See *Stokstad, Almquist, Mecchi, Manning, and Rogers*, 137, 373
- See *Klose and Almquist*, 138, 467
- , Mecchi, E., and Kratzer, F. H. Creatine formation in the chick, 141, 365
- , Kratzer, F. H., and Mecchi, E. Further experiments on creatine formation in the chick, 148, 17
- and Grau, C. R. Growth-promoting activity of betaine in the chick, 149, 575
- , Mackinney, G., and Mecchi, E. The diet of hens and the vitamin A potency of their eggs, 150, 99
- Althausen, T. L. See *Eiler, Stockholm, and Althausen*, 134, 283
- Altschul, A. M., Sidwell, A. E., Jr., and Hogness, T. R. Note on the preparation and properties of hemoglobin, 127, 123
- and Hogness, T. R. The hemoglobin-oxygen equilibrium, 129, 315
- , Abrams, Richard, and Hogness, T. R. Soluble cytochrome C oxidase, 130, 427
- , —, and —. Cytochrome *c* peroxidase, 136, 777
- See *Abrams, Altschul, and Hogness*, 142, 303
- Alvarez-Tostado, C. Convection effects in electrophoresis, 135, 799
- Alving, Alf S., Rubin, Jack, and Miller, Benjamin F. A direct colorimetric method for the determination of inulin in blood and urine, 127, 609
- See *Flox, Pitesky, and Alving*, 142, 147

Alving, Alf S.—*continued*:

- See *Sendroy and Alving*, 142, 159
Amberson, William R. See *Qster and Amberson*, 131, 19
Ames, James B. See *Ratish, Bullowa, Ames, and Scudi*, 128, 279
Ammundsen, Esther. Studies on the presence of non-carbon monoxide-combining (inactive) hemoglobin in the blood of normal persons, 138, 563
Anchel, Marjorie, and Waelsch, Heinrich. The higher fatty aldehydes. I. Isolation from small amounts of tissue with acidic carbonyl reagents, 145, 605
Andersch, Marie A. See *Fay, Andersch, and Behrmann*, 144, 383
Anderson, Arthur K. See *Matthews, Dow, and Anderson*, 135, 697
Anderson, Carl E. See *Irvin, Merker, Anderson, and Johnston*, 131, 439
— See *Tenery and Anderson*, 135, 659
Anderson, Edith L., and Marrian, Guy Frederic. The identification of equol as 7-hydroxy-3-(4'-hydroxyphenyl) chroman, and the synthesis of racemic equol methyl ether, 127, 649
Anderson, Ernest, Hechtman, John, and Seeley, Millard. Hemicelluloses from cottonseed hulls, 126, 175
—, Seeley, Millard, Stewart, William T., Redd, John C., and Westerbeke, Don. The origin and composition of the hemicelluloses obtained from hardwoods, 135, 189
—, Kesselman, Joseph, and Bennett, Emil C. Polyuronide hemicelluloses isolated from sap-wood and compression wood of white pine, *Pinus strobus*, L., 140, 563
—, Gillette, Leslie A., and Seeley, Millard G. The mucilage from Indian wheat, *Plantago fastigiata*, 140, 569
—, Kaster, Robert B., and Seeley, Millard G. Hemicelluloses and pectic materials from cottonwood, *Populus macdougalii*, 144, 767
Anderson, Evelyn. See *Morton, Chaikoff, Reinhardt, and Anderson*, 147, 757

- Anderson, H. D., and Elvehjem, C. A. Variations in the blood calcium and phosphorus with the age of the dog, 134, 217
Anderson, John A. See *Allison, Cole, Leathem, Nastuk, and Anderson*, 147, 255
Anderson, R. J. See *Stodola, Lesuk, and Anderson*, 126, 505
— See *Wiegand and Anderson*, 126, 515
— See *Cason and Anderson*, 126, 527
— and Creighton, M. M. The chemistry of the lipids of tubercle bacilli. LVII. The mycolic acids of the avian tubercle bacillus wax, 129, 57
— See *Salisbury and Anderson*, 129, 505
— See *Geiger and Anderson*, 129, 519
— and Creighton, M. M. Concerning the synthesis of phthiocol, 130, 429
— See *Geiger and Anderson*, 131, 539
— and Creighton, M. M. The chemistry of the lipids of tubercle bacilli. LIX. The composition of the polysaccharide of the firmly bound lipids of the leprosy bacillus, 131, 549
—, —, and Peck, Robert L. The chemistry of the lipids of tubercle bacilli. LX. Concerning the firmly bound lipids of the avian tubercle bacillus, 133, 675
—, Peck, Robert L., and Creighton, M. M. The chemistry of the lipids of tubercle bacilli. LXI. The polysaccharide of the phosphatide obtained from cell residues in the preparation of tuberculin, 136, 211
— See *Lesuk and Anderson*, 136, 603
— See *Peck and Anderson*, 138, 135
— See *Lesuk and Anderson*, 139, 457
— See *Peck and Anderson*, 140, 89
Anderson, Thomas F. See *Stanley and Anderson*, 139, 325
— and Stanley, W. M. A study by means of the electron microscope of the reaction between tobacco mosaic virus and its antiserum, 139, 339
— See *Stanley and Anderson*, 146, 25

- Andersson, Kjell J. I. See *Miller and Andersson*, 144, 459, 465, 475
- Andrade, Sylvia O. See *Rocha e Silva and Andrade*, 149, 9
- Andrews, James C. See *Kyker, Webb, and Andrews*, 139, 551
- Andrews, John S., and Brooks, H. J. A quantitative method for the determination of blood in the feces of sheep by means of the Evelyn photoelectric colorimeter, 138, 341
- Ansbacher, S., and Fernholz, Erhard. Vitamin K activity in the benzoquinone series, 131, 399
- See *Martin and Ansbacher*, 138, 441
- Anslo, William P., Jr. See *Fulton and Bergmann*, 127, 627
- See *Binkley, Anslo, and du Vigneaud*, 143, 559
- Anson, M. L. The sulfhydryl groups of egg albumin, 135, 797
- Antopol, William, and Glick, David. Studies in histochemistry. XV. The histological distribution of choline esterase in the adrenal gland, 132, 669
- See *Scudi, Unna, and Antopol*, 135, 371
- Archibald, Reginald M. See *Beckman, Hiller, Shedlovsky, and Archibald*, 148, 247
- and Hamilton, Paul B. Removal of canavanine from preparations of jack bean urease, 150, 155
- See *Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller*, 150, 481
- Armstrong, Marvin D. See *Kilmer, Armstrong, Brown, and du Vigneaud*, 145, 495
- Arnold, Aaron. See *Weinstock, May, Arnold, and Price*, 135, 343
- Arnold, L. Earle, and Opsahl, Jeanette C. Partial racemization of glutamic acid in boiling hydrochloric acid solutions, 133, 765
- and —. Racemization of glutamic acid with heat, 134, 649
- , Kazal, Louis A., and De Falco, Ralph J. The preparation of apparently non-antigenic beef serum protein by treatment with alkali, 145, 347
- Artom, Camillo, and Freeman, John A. Individual phospholipids in plasma of rabbits after fatty meals, 135, 59
- Cephalins, choline-containing phospholipids, and total phospholipids in normal human plasma, 139, 65
- Phospholipid metabolism in denervated muscles, 139, 953
- See *Fishman and Artom*, 145, 345
- and Fishman, William H. The relation of the diet to the composition of tissue phospholipids. I. The normal composition of liver and muscle lipids of the rat, with a note on the analytical procedures, 148, 405
- and —. II. Changes in tissue phospholipids induced by experimental diets, 148, 415
- and —. III. Effects of supplemented experimental diets on tissue phospholipids in rats of two age groups, 148, 423
- and Swanson, Marjorie. The action of bromo-substituted fatty acids on liver fat, 148, 633
- Astrup, Tage, and Darling, Sven. Preparation of thrombin, 133, 761
- Astwood, E. B. See *Talbot, Lowry, and Astwood*, 132, 1
- and Jones, G. E. Seegar. A simple method for the quantitative determination of pregnanediol in human urine, 137, 397
- Atkin, Lawrence, Schultz, A. S., and Frey, Charles N. Ultramicrodetermination of thiamine by the fermentation method, 129, 471
- See *Schultz, Atkin, and Frey*, 135, 267
- 136, 713
- Aull, J. C., and Kinard, Fredrick W. The determination of tungsten in biological materials, 135, 119
- Austoni, Mario E., Rabinovitch, Alexander, and Greenberg, David M. The iron content of the tissues of normal, anemic, and iron-enriched rats freed from blood by viviperfusion, 134, 17
- and Greenberg, David M. Studies in iron metabolism with the aid of its

- artificial radioactive isotope. The absorption, excretion, and distribution of iron in the rat on normal and iron-deficient diets, 134, 27
- Avrin, Ira. See *Erickson, Avrin, Teague, and Williams*, 135, 671
- Axelrod, A. E., and Elvehjem, C. A. The determination of coenzyme I in animal tissues, 131, 77
- , Madden, Robert J., and Elvehjem, C. A. The effect of a nicotinic acid deficiency upon the coenzyme I content of animal tissues, 131, 85
- , Sober, H. A., and Elvehjem, C. A. The *d*-amino acid oxidase content of rat tissues in riboflavin deficiency, 134, 749
- See *Wagner, Axelrod, Lipton, and Elvehjem*, 136, 357
- , Spies, Tom D., and Elvehjem, C. A. The effect of a nicotinic acid deficiency upon the coenzyme I content of the human erythrocyte and muscle, 138, 667
- and Elvehjem, C. A. The xanthine oxidase content of rat liver in riboflavin deficiency, 140, 725
- , Swingle, Karl F., and Elvehjem, C. A. The stimulatory effect of calcium upon the succinoxidase activity of fresh rat tissues, 140, 931
- See *Katzenelbogen, Axelrod, and Elvehjem*, 141, 611
- , Potter, V. R., and Elvehjem, C. A. The succinoxidase system in riboflavin-deficient rats, 142, 85
- See *Pilgrim, Axelrod, and Elvehjem*, 145, 237
- , Swingle, Karl F., and Elvehjem, C. A. Studies on the succinoxidase system of rat liver in riboflavin deficiency, 145, 297
- See *Swingle, Axelrod, and Elvehjem*, 145, 581
- , Gross, Paul, Bosse, M. D., and Swingle, K. F. Treatment of leucopenia and granulopenia in rats receiving sulfaguanidine in purified diets, 148, 721
- Axelrod, Bernard. See *Balls, Axelrod, and Kies*, 149, 491
- B
- Babbitt, Dorothea. See *Bratton and Marshall*, 128, 537
- Bacher, F. A. See *Trenner and Bacher*, 137, 745
- Bachman, Carl. See *Gurin, Bachman, and Wilson*, 128, 525
- Photometric determination of estrogens. I. A modified Kober reaction for determining the total estrogens in a mixture of estrogenic steroids, 131, 455
- II. A new color reaction for estriol, 131, 463
- See *Gurin, Bachman, and Wilson*, 133, 467, 477
- and Pettit, Dorothy Seymour. Photometric determination of estrogens. III. A procedure for the estimation of the estrogens of pregnancy urine, 138, 689
- See *Lundgren, Gurin, Bachman, and Wilson*, 142, 367
- Baer, Erich, and Fischer, Hermann O. L. Studies on acetone-glyceraldehyde. IV. Preparation of *d*(+)-acetone glycerol, 128, 463
- and —. V. Synthesis of optically active glycerides from *d*(+)-acetone glycerol, 128, 475
- and —. VI. Synthesis of the biological *l*(-)- α -glycerophosphoric acid, 128, 491
- and —. Synthesis of the *d*(+)- α -glycerophosphoric acid and the action of phosphatases on synthetic *d*(+)-, *l*(-), and *dl*- α -glycerophosphoric acids, 135, 321
- and —. Studies on acetone-glyceraldehyde, and optically active glycerides. IX. Configuration of the natural batyl, chimyl, and selachyl alcohols, 140, 397
- and —. Dimeric *dl*-glyceraldehyde-1,3-diphosphate, 143, 563
- and —. Synthesis of dimethyl ethers

Baer, Erich—continued:

- of the two enantiomorphic α -butyrins and their hydrolysis by lipases, 145, 61
- A suggested mechanism of biological acylations. I. The formation of acetylcholine, 146, 391
- and Fischer, Hermann O. L. Glycer-aldehyde 1,3-diphosphate (dimeric), 150, 213
- and —. A synthesis of *dl*-glycer-aldehyde 3-phosphate, 150, 223
- Baernstein, Harry D., and Grand, J. A. The effect of lead acetate on oxygen uptake of rat liver slices, 140, 285
- Bailey, B., Belfer, Samuel, Eder, Howard, and Bradley, H. C. Oxidation, reduction, and sulfhydryl in autolysis, 143, 721
- Bailey, C. H. See *Stamberg and Bailey*, 126, 479
- Baker, Dwight L., and Nelson, J. M. Non-oxidase nature of kidney "laccase," 147, 341
- Baker, E. E. See *Hassid, Baker, and McCready*, 149, 303
- Baker, Zelma. See *Miller, Allinson, and Baker*, 130, 383
- and Miller, Benjamin F. Studies on the metabolism of creatine and creatinine. II. The distribution of creatine and creatinine in the tissues of the rat, dog, and monkey, 130, 393
- and —. III. Formation of creatine by isolated rat tissues, 132, 233
- Baldes, Edward J. See *Roepke and Baldes*, 126, 349
- Baldwin, H. R. See *Hale, Davis, and Baldwin*, 146, 553, 565
- Bale, William F. See *Haven and Bale*, 129, 23
- See *Manly and Bale*, 129, 125
- See *Hahn, Granick, Bale, and Michaelis*, 150, 407
- Ball, Eric G. Xanthine oxidase: purification and properties, 128, 51
- and Ramsdell, Pauline A. The catalytic action of milk flavoprotein in the oxidation of reduced diphosphopyridine nucleotide (cozymase), 131, 767

Ball, Eric G.—continued:

- A test of 2-keto-*l*-gulonic acid for antiscorbutic properties, 134, 177
- and Meyerhof, Bettina. On the occurrence of iron-porphyrin compounds and succinic dehydrogenase in marine organisms possessing the copper blood pigment hemocyanin, 134, 483
- See *Tucker and Ball*, 139, 71
- , Tucker, Helen F., Solomon, A. K., and Vennesland, Birgit. The source of pancreatic juice bicarbonate, 140, 119
- Ballou, Gerald A., and Luck, James Murray. Buffer influence on taka-diastase, 135, 111
- and —. The effects of different buffers on the activity of β -amylase, 139, 233
- Balls, A. K., and Lineweaver, Hans. Isolation and properties of crystalline papain, 130, 669
- See *Martin, Balls, and McKinney*, 130, 687
- See *Jansen and Balls*, 137, 459
- , Axelrod, Bernard, and Kies, Marian W. Soy bean lipoxidase, 149, 491
- Bamman, Frieda. See *Jensen, Tolksdorf, and Bamman*, 135, 791
- Barborka, Clifford J. See *Friedemann and Barborka*, 138, 785
- 141, 993
- Barkan, Georg, and Walker, Burnham S. The red blood cell as a source of the iron and bilirubin of the blood plasma, 131, 447
- and —. Determination of serum iron and pseudohemoglobin iron with *o*-phenanthroline, 135, 37
- and —. Differentiation of red blood cells by their pseudohemoglobin content, 135, 803
- Barker, H. A. See *Hassid and Barker*, 134, 163
- Studies on the methane fermentation. V. Biochemical activities of *Methanobacterium omelianskii*, 137, 153
- and Beck, J. V. The fermentative decomposition of purines by *Clos-*

- tridium acidi-urici* and *Clostridium cylindrosporum*, 141, 3
- Barker, S. B., Shorr, Ephraim, and Malam, Muriel. Studies on the Pasteur reaction: effect of iodoacetic acid on the carbohydrate metabolism of isolated mammalian tissues, 129, 33
- See Chambers, Chandler, and Barker, 131, 95
- Acetaldehyde in mammalian red blood cells, 137, 783
- and Summerson, William H. The colorimetric determination of lactic acid in biological material, 138, 535
- Barlow, O. W. See Huber and Barlow, 149, 125
- Barnes, Richard H., and Wick, Arne N. A method for the determination of blood acetone bodies, 131, 413
- See MacKay, Barnes, Carne, and Wick, 135, 157
- , Miller, Elmer S., and Burr, George O. The absorption and transport of fatty acids across the intestinal mucosa, 140, 233
- , —, and —. The adrenals and fat absorption, 140, 241
- , —, and —. The influence of the adrenals on the transport of fat into the liver, 140, 247
- , —, and —. Fat absorption in essential fatty acid deficiency, 140, 773
- See Swendseid, Barnes, Hemingway, and Nier, 142, 47
- , Lundberg, W. O., Hanson, H. T., and Burr, George O. The effect of certain dietary ingredients on the keeping quality of body fat, 149, 313
- Barnes, S. T. See Mueller, Kemmerer, Cox, and Barnes, 134, 573
- Barnum, Cyrus P. See MacKay, Wick, and Barnum, 135, 183
- 136, 503
- 137, 183
- See MacKay, Wick, Carne, and Barnum, 138, 63
- Barrett, H. M., and Johnston, J. H. The fate of trichloroethylene in the organism, 127, 765
- Barron, E. S. Guzman, and Lyman, Carl M. Studies on biological oxidations. XI. The metabolism of pyruvic acid by animal tissues and bacteria, 127, 143
- See Lyman and Barron, 132, 293
- Studies on biological oxidations. XIII. The oxidation-reduction potentials of *Spirographis* hemin and its hemochromogens, 133, 51
- , Dick, George F., and Lyman, Carl M. The chemical nature of scarlet fever toxin, 137, 267
- and Friedemann, Theodore E. Studies on biological oxidations. XIV. Oxidations by microorganisms which do not ferment glucose, 137, 593
- and Lyman, Carl M. Studies on biological oxidations. XV. The rates of reduction of thiamine and diphosphothiamine, 141, 951
- , —, Lipton, M. A., and Goldinger, J. M. Studies on biological oxidations. XVI. The effect of thiamine on condensation reactions of pyruvate, 141, 957
- , Goldinger, J. M., Lipton, M. A., and Lyman, Carl M. Studies on biological oxidations. XVII. The effect of thiamine on the metabolism of α -ketoglutarate, 141, 975
- Barrus, Dorothy. See Sunderman, 143, 185
- Bartlett, Paul. See Gaebler and Bartlett, 129, 559
- Basinski, Daniel H. See Sealock, Perkins, and Basinski, 140, 153
- Bastedo, W. A. See Scudi, Bastedo, and Webb, 136, 399
- Bauer, Walter. See Robertson, Ropes, and Bauer, 133, 261
- Bauld, W. S. See Heard, Bauld, and Hoffman, 141, 709
- Baumann, C. A., and Stare, F. J. The effect of malonate on tissue respiration, 133, 183
- See Stare and Baumann, 133, 453
- See Berger, Johnson, and Baumann, 137, 389

Baumann, C. A.—continued:

- , See *Jacobi, Baumann, and Meek*,
138, 571
- , See *Jacobi and Baumann*, 142, 65
- , **Foster, E. G., and Moore, P. R.** The effect of dibenzanthracene, of alcohol, and of other agents on vitamin A in the rat, 142, 597
- , **Field, John B., Overman, Ralph S., and Link, Karl Paul.** Studies on the hemorrhagic sweet clover disease. X. Induced vitamin C excretion in the rat and its effect on the hypoprothrombinemia caused by 3,3'-methylenebis-(4-hydroxycoumarin), 146, 7
- Baumann, Emil J., and Metzger, Nannette.** Iodine in pituitary and some other tissues, 127, 111
- Baumberger, J. Percy.** See *Horowitz and Baumberger*, 141, 407
- Baxter, J. G., Harris, P. L., Hickman, K. C. D., and Robeson, C. D.** Non-crystallizable vitamin A, 141, 991
- Bazett, H. C.** A modified Haldane gas analyzer for analysis of mixtures with one hundred per cent absorbable gas, 139, 81
- Beach, Elliot F., and White, Abraham.** Synthesis of cystine by the albino rat, 127, 87
- , **Erickson, Betty Nims, Bernstein, Samuel S., Williams, Harold H., and Macy, Icie G.** The amino acid composition of erythrocyte posthemolytic residue of five mammalian species, 128, 339
- , **Bernstein, Samuel S., Hummel, Frances C., Williams, Harold H., and Macy, Icie G.** Total sulfur, cystine, and methionine content of blood globins of five mammalian species, 130, 115
- , See *Stern, Beach, and Macy*, 130, 733
- , **Bernstein, Samuel S., Hoffman, Olive D., Teague, D. Maxwell, and Macy, Icie G.** Distribution of nitrogen and protein amino acids in human and in cow's milk, 139, 57
- and **Teague, D. Maxwell.** A gravi-

Beach, Elliot F.—continued:

- metric method for the determination of methionine, 142, 277
- , **Munks, Bertha, and Robinson, Abner.** The amino acid composition of animal tissue protein, 148, 431
- Beadle, B. W., and Zscheile, F. P.** Studies on the carotenoids. II. The isomerization of β -carotene and its relation to carotene analysis, 144, 21
- , **Greenwood, D. A., and Kraybill, H. R.** Stability of thiamine to heat. I. Effect of pH and buffer salts in aqueous solutions, 149, 339
- , See *Greenwood, Beadle, and Kraybill*, 149, 349
- Beadle, G. W.** See *Horowitz and Beadle*, 150, 325
- Bear, Richard S., and Cori, Carl F.** X-ray diffraction studies of synthetic polysaccharides, 140, 111
- Beard, Dorothy.** See *Neurath, Cooper, Sharp, Taylor, Beard, and Beard*, 140, 293
- , See *Sharp, Taylor, Beard, and Beard*, 142, 193
- Beard, J. W.** See *Neurath, Cooper, Sharp, Taylor, Beard, and Beard*, 140, 293
- , See *Sharp, Taylor, Beard, and Beard*, 142, 193
- , See *Sharp, Hebb, Taylor, and Beard*, 142, 217
- Bebb, K. C.** See *Treadwell, King, Bebb, and Tidwell*, 143, 203
- Beck, J. V.** See *Barker and Beck*, 141, 3
- Beck, Lyle Vibert.** Organic phosphate and "fructose" in rat intestinal mucosa, as affected by glucose and by phlorhizin, 143, 403
- Beckman, William W., Hiller, Alma, Shedlovsky, Theodore, and Archibald, Reginald M.** The occurrence in urine of a protein soluble in trichloroacetic acid, 148, 247
- Beecher, Henry K., Follansbee, R., Murphy, A. J., and Craig, F. N.** Determination of the oxygen content of

Beecher, Henry K.—continued:

- small quantities of body fluids by polarographic analysis, 146, 197
- and Craig, Francis N. Tissue metabolism following shock induced by hemorrhage, 148, 383
- Beeson, Paul B. See Goebel, Beeson, and Hoagland, 129, 455
- Behre, Jeanette Allen. A modified salicylaldehyde method for the determination of acetone bodies in blood and urine, 136, 25
- Behrens, Otto K., and Bergmann, Max. Cosubstrates in proteolysis, 129, 587
- , Doherty, David G., and Bergmann, Max. Resolution of *dl*-phenylalanine by asymmetric enzymatic synthesis, 136, 61
- See Miller, Behrens, and du Vigneaud, 140, 411
- Preparation of *l*-alanine from *dl*-alanine by the action of *d*-amino acid oxidase, 141, 465
- Coenzymes for glyoxalase, 141, 503
- Behrmann, Vivian G. See Fay, Andersch, and Behrmann, 144, 383
- Belfer, Samuel. See Eder, Bradley, and Belfer, 128, 551
- See Bailey, Belfer, Eder, and Bradley, 143, 721
- , Koran, Pearl, Eder, Howard, and Bradley, H. C. The autolysis of invertebrate tissues, 147, 345
- Bender, R. C. See Supplee, Jensen, Bender, and Kahlenberg, 144, 79
- Bendich, Aaron. See Chargaff, Moore, and Bendich, 145, 593
- See Chargaff and Bendich, 149, 93
- Benditt, Eleanor. See Sunderman, 143, 185
- Bennett, Emil C. See Anderson, Kesselman, and Bennett, 140, 563
- Bennett, Emmett. The hemicelluloses of forage plants, 146, 407
- Bennett, Mary Adelia. The replaceability of *dl*-methionine in the diet of the albino rat with *dl*-methionine sulfone and *dl*-methionine methylsulfonium chloride, 141, 573

Bennett, Mary Adelia—continued:

- and Toennies, Gerrit. A nutritional assay of casein modified by the action of hydrogen peroxide and formic acid, 145, 671
- Benotti, Joseph. See Thannhauser, Setz, and Benotti, 126, 785
- See Thannhauser, Benotti, and Reinstein, 129, 709
- See Thannhauser, Benotti, Walcott, and Reinstein, 129, 717
- Benotti, Norbert. See Ginsburg and Benotti, 131, 503
- Berg, Benjamin N. See Bloch, Berg, and Rittenberg, 149, 511
- Berg, Clarence P. See Totter and Berg, 127, 375
- See Sharp and Berg, 141, 739
- See Borchers and Berg, 142, 693
- See Borchers, Totter, and Berg, 142, 697
- See Borchers, Berg, and Whitman, 145, 657
- See Featherstone and Berg, 146, 131
- Berg, Robert L. See Westerfeld, Stotz, and Berg, 144, 657
- See Westerfeld and Berg, 148, 523
- See Westerfeld, Stotz, and Berg, 149, 237
- Bergeim, Olaf. See Kirch and Bergeim, 143, 575
- 148, 445
- Berger, Julius, and Johnson, Marvin J. Metal activation of peptidases, 130, 641
- and —. The leucylpeptidases of malt, cabbage, and spinach, 130, 655
- and —. The occurrence of leucylpeptidase, 133, 157
- and —. The activation of dipeptidases, 133, 639
- , —, and Baumann, C. A. Enzymatic hydrolysis of *d*-peptides, 137, 389
- Bergmann, Max. See Fruton and Bergmann, 127, 627
- , Fruton, Joseph S., and Pollok, Heinz. The specificity of trypsin, 127, 643
- and Stein, William H. A new principle for the determination of amino acids, and its application to collagen and gelatin, 128, 217

Bergmann, Max—continued:

- See *Behrens and Bergmann*, 129, 587
- See *Ing and Bergmann*, 129, 603
- and *Stein, William H.* Naphthalene- β -sulfonic acid as a reagent for amino acids, 129, 609
- See *Fruton and Bergmann*, 130, 19
- See *Hofmann and Bergmann*, 130, 81
- See *Fruton, Irving, and Bergmann*, 132, 465
- See *Fruton and Bergmann*, 133, 153
- See *Fruton, Irving, and Bergmann*, 133, 703
- See *Hofmann and Bergmann*, 134, 225
- See *Stein and Bergmann*, 134, 627
- See *Doherty, Stein, and Bergmann*, 135, 487
- See *Behrens, Doherty, and Bergmann*, 136, 61
- See *Fruton and Bergmann*, 136, 559
- See *Irving, Fruton, and Bergmann*, 138, 231
- See *Hofmann and Bergmann*, 138, 243
- See *Fruton, Irving, and Bergmann*, 138, 249
- See *Smith and Bergmann*, 138, 789
- See *Stein, Moore, and Bergmann*, 139, 481
- See *Irving, Fruton, and Bergmann*, 139, 569
- See *Fruton, Irving, and Bergmann*, 141, 763
- See *Stein, Moore, Stamm, Chou, and Bergmann*, 143, 121
- See *Irving, Fruton, and Bergmann*, 144, 161
- and *Fruton, Joseph S.* The influence of substrate structure on the kinetics of carboxypeptidase action, 145, 247
- See *Fruton and Bergmann*, 145, 253
- See *Doherty, Tietzman, and Bergmann*, 147, 617
- Bergmann, Werner.** The splitting of digitonides, 132, 471
- Bergström, Sune.** See *Wintersteiner and Bergström*, 137, 785

Bergström, Sune—continued:

- and *Wintersteiner, O.* Autoxidation of sterols in colloidal aqueous solution. The nature of the products formed from cholesterol, 141, 597
- and —. Autoxidation of sterols in colloidal aqueous solution. II. Δ^6 -Cholestenediol-3(β),5, a rearrangement product of 7(β)-hydroxycholesterol, 143, 503
- and —. III. Quantitative studies on cholesterol, 145, 309
- and —. IV. The influence of esterification and of constitutional factors, 145, 327
- Berkman, Sam.** See *Dorfman, Berkman, and Koser*, 144, 393
- Berman, R. A.** See *Talbot, Wolfe, MacLachlan, and Berman*, 139, 521
- See *Talbot, Berman, and MacLachlan*, 143, 211
- Bernhard, Karl, and Schoenheimer, Rudolf.** The inertia of highly unsaturated fatty acids in the animal, investigated with deuterium, 133, 707
- and —. The rate of formation of stearic and palmitic acids in normal mice, 133, 713
- Bernhart, F. W.** Denaturation and molecular splitting of egg albumin by ultraviolet radiant energy, 128, 289
- . Molecular weight of egg albumin, 132, 189
- and *Skeggs, Leonard.* The iron content of crystalline human hemoglobin, 147, 19
- Bernheim, Frederick, Bernheim, Mary L. C., and Michel, Harry O.** The effect of pyrrole on the oxidation of amines and the non-natural isomers of certain amino acids, 126, 273
- and —. The action of vanadium on the oxidation of phospholipids by certain tissues, 127, 353
- and —. The effect of titanium on the oxidation of sulphydryl groups by various tissues, 127, 695
- and —. Note on the action of manganese and some other metals on the oxidation of certain substances by liver, 128, 79

Bernheim, Frederick.—continued:

- The action of papain and trypsin on certain dehydrogenases, 133, 141
- The action of fatty acids on the choline oxidase of rat liver, 133, 291
- Note on the action of copper and phenylhydrazine on certain dehydrogenases, 133, 485
- and Bernheim, Mary L. C. Action of 4-amino-2-methylnaphthol on the oxidation of certain sulphydryl groups, 134, 457
- See *Handler, Bernheim, and Klein*, 138, 203
- and Bernheim, Mary L. C. The effect of 2,3,5-triiodobenzoate and monoiodoacetate on the oxidation of certain substances by rat brain, 138, 501
- and Klein, J. Raymond. Action of sodium selenite on the oxidation of l-proline, 139, 827
- and Bernheim, Mary L. C. Note on the oxidation of various sugars by brain tissue, 140, 441
- The oxidation of benzoic acid and related substances by certain *Mycobacteria*, 143, 383
- and Bernheim, Mary L. C. Note on the sarcosine oxidase, 143, 391
- , Neurath, Hans, and Erickson, John O. The denaturation of proteins and its apparent reversal. IV. Enzymatic hydrolysis of native, denatured, and apparently reversibly denatured proteins, 144, 259
- See *Handler and Bernheim*, 144, 401
- and Bernheim, Mary L. C. The action of phenylthiocarbamide on tyrosinase, 145, 213
- See *Handler and Bernheim*, 148, 649
- See *Perlzweig, Bernheim, and Bernheim*, 150, 401
- Bernheim, Mary L. C. See *Bernheim, Bernheim, and Michel*, 126, 273

Bernheim, Mary L. C.—continued:

- See *Bernheim and Bernheim*, 127, 353, 695, 128, 79, 134, 457
- See *Handler, Bernheim, and Klein*, 138, 211
- See *Bernheim and Bernheim*, 138, 501, 140, 441, 143, 391, 145, 213
- See *Handler and Bernheim*, 150, 335
- See *Perlzweig, Bernheim, and Bernheim*, 150, 401
- Bernstein, Samuel S. See *Beach, Erickson, Bernstein, Williams, and Macy*, 128, 339
- See *Beach, Bernstein, Hummel, Williams, and Macy*, 130, 115
- See *Beach, Bernstein, Hoffman, Teague, and Macy*, 139, 57
- Bessey, Otto A. A method for the determination of small quantities of ascorbic acid and dehydroascorbic acid in turbid and colored solutions in the presence of other reducing substances, 126, 771
- See *Hastings, Muus, and Bessey*, 129, 295
- See *Stotz and Bessey*, 143, 625
- Bibler, Walter G. See *Eichelberger and Bibler*, 132, 645
- Bills, Charles E., Massengale, O. N., Hickman, K. C. D., and Gray, E. LeB. A new vitamin D in cod liver oil, 126, 241
- Bina, Albert F., Thomas, James M., and Brown, Elmer B. The determination of vitamin B₆ (pyridoxine) in foods, 148, 111
- Binkley, Francis. See *du Vigneaud, Wood, and Binkley*, 138, 369
- , Anslow, William P., Jr., and du Vigneaud, Vincent. The formation of cysteine from *l*-S-(β -amino- β -carboxy-ethyl)homocysteine by liver tissue, 143, 559

* **Binkley, Francis—continued:**

- and du Vigneaud, Vincent. The formation of cysteine from homocysteine and serine by liver tissue of rats, 144, 507
- On the nature of serine dehydrase and cysteine desulfurase, 150, 261
- Binkley, S. B., MacCorquodale, D. W., Thayer, Sidney A., and Doisy, Edward A.** The isolation of vitamin K₁, 130, 219
- See *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 130, 433
- See *McKee, Binkley, Thayer, MacCorquodale, and Doisy*, 131, 327
- See *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 131, 357
- , **McKee, R. W., Thayer, Sidney A., and Doisy, Edward A.** The constitution of vitamin K₂, 133, 721
- Birch, T. W., and György, Paul.** Physicochemical properties of the factor (vitamin H) curative of egg white injury, 131, 761
- Bird, H. R., Oleson, J. J., Elvehjem, C. A., and Hart, E. B.** Effectiveness of chondroitin in preventing gizzard erosion in chicks, 126, 671
- See *Oleson, Bird, Elvehjem, and Hart*, 127, 23
- Bird, O. D., Vandenbelt, J. M., and Emmett, A. D.** Adaptation of the Soudi colorimetric method for pyridoxine, 142, 317
- Birkinshaw, J. H., and Raistrick, H.** Notatin: an antibacterial glucose aerodehydrogenase from *Penicillium notatum* Westling, 148, 459
- Bischoff, Fritz.** The picric acid and picrolonic acid precipitates of gonadotropic extracts, 132, 35
- Chemical studies on the pituitary "antagonist," 133, 621
- The action of cysteine or cyanide upon gonadotropic extracts, 134, 641
- Concerning the reversible inactivation of prolan, 145, 545
- Biskind, M. S.** See *Shelesnyak and Biskind*, 143, 663

- Black, Simon, Frost, D. V., and Elvehjem, C. A.** The relation of vitamin B₆ and pantothenic acid to factor W studies, 132, 65
- , **Overman, Ralph S., Elvehjem, C. A., and Link, Karl Paul.** The effect of sulfaguanidine on rat growth and plasma prothrombin, 145, 137
- Blackwood, Frances C.** See *d'Elseaux, Blackwood, Palmer, and Sloman*, 144, 529
- Blanchard, Kenneth C.** The isolation of *p*-aminobenzoic acid from yeast, 140, 919
- Blatherwick, N. R.** See *Larson, Chambers, Blatherwick, Ewing, and Sawyer*, 129, 701
- , **Larson, Hardy W., and Sawyer, Susan D.** Metabolism of *d*-mannoheptulose. Excretion of the sugar after eating avocado, 133, 643
- , **Bradshaw, Phoebe J., Ewing, Mary E., Larson, Hardy W., and Sawyer, Susan D.** The metabolism of *d*-sorbitol, 134, 549
- See *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 136, 1
- , **Bradshaw, Phoebe J., Ewing, Mary E., and Sawyer, Susan D.** Comparative metabolism of glucose and fructose in the rat, 136, 615
- See *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 138, 353
- Blauch, Mary Brannock, and Koch, F. C.** A new method for the determination of uric acid in blood, with uricase, 130, 443
- and —. Application of the uricase method to the study of changes *in vitro* in the uric acid content of certain mammalian bloods, 130, 455
- , —, and **Hanke, Martin E.** A study of xanthine oxidase of rat blood, 130, 471
- Bliss, Sidney.** Increased excretion of urinary ammonia in the dog following the intravenous injection of both natural and unnatural forms of certain amino acids, 137, 217

- Blix, Gunnar, Tiselius, Arne, and Svensson, Harry. Lipids and polysaccharides in electrophoretically separated blood serum proteins, 137, 485
- . Electrophoresis of lipid-free blood serum, 137, 495
- . On the nitrogenous constituent of cephalin, 139, 471
- Bloch, Konrad, and Schoenheimer, Rudolf. Studies in protein metabolism. XI. The metabolic relation of creatine and creatinine studied with isotopic nitrogen, 131, 111
- and — . The biological formation of creatine, 133, 633
- and — . The biological origin of the amidine group in creatine, 134, 785
- and — . The biological demethylation of sarcosine to glycine, 135, 99
- , — , and Rittenberg, D. Rate of formation and disappearance of body creatine in normal animals, 138, 155
- and — . The biological precursors of creatine, 138, 167
- and Rittenberg, D. The biological formation of cholesterol from acetic acid, 143, 297
- and — . On the utilization of acetic acid for cholesterol formation, 145, 625
- and — . The preparation of deuterio cholesterol, 149, 505
- , Berg, Benjamin N., and Rittenberg, D. The biological conversion of cholesterol to cholic acid, 149, 511
- Block, Paul, Jr. A note on the conversion of diiodotyrosine into thyroxine, 135, 51
- Block, Richard J., and Bolling, Diana. The amino acid composition of keratins. The composition of gorgonin, spongin, turtle scutes, and other keratins, 127, 685
- . The composition of keratins. The amino acid composition of hair, wool, horn, and other eukeratins, 128, 181
- and Bolling, Diana. Chemical and metabolic studies on phenylalanine. I. The nitration of phenylalanine, 129, 1
- Block, Richard J.—*continued*:
- and Bolling, Diana. The micro-estimation of threonine, 130, 365
- . The estimation of histidine, 133, 67
- . Basic amino acid content of human serum proteins. The influence of the ingestion of arginine on the composition of the serum proteins, 133, 71
- . See *Jervis, Block, Bolling, and Kanze*, 134, 105
- , Jervis, George A., Bolling, Diana, and Webb, Merrill. Chemical and metabolic studies on phenylalanine. III. The amino acid content of tissue proteins of normal and phenylpyruvic oligophrenic individuals. A note on the estimation of phenylalanine, 134, 567
- Block, Walter D. See *Murrill, Block, and Newburgh*, 133, 521
- and Buchanan, Oliver H. The micro-determination of gold in biological fluids, 136, 379
- Blohm, Clyde L. See *Alles, Blohm, and Saunders*, 144, 757
- Blood, Frank R., and Lewis, Howard B. The metabolism of sulfur. XXIX. S-Carboxymethylcysteine, 139, 407
- and — . XXX. Thiourea, 139, 413
- Bloor, W. R. Inheritance effect of exercise on the phospholipid and cholesterol content of muscle, 132, 77
- and Bullen, S. S. The determination of adrenalin in blood, 138, 727
- . See *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 139, 897
- . See *Oleson and Bloor*, 141, 349
- . See *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 143, 473
- Blotner, Harry. See *Gibson and Blotner*, 126, 551
- Blunden, Harry, Hallman, Lois F., Morehouse, Margaret Gulick, and Deuel, Harry J., Jr. Studies on ketosis. XVIII. An experimental study of the Van Slyke procedure for the determination of β -hydroxybutyric acid, 135, 757

- Bobbitt, Blanche G., and Deuel, Harry J., Jr.** Studies on ketosis. XX. The effect of glycogen on the oxidation of butyric acid by rat liver slices, 143, 1
- Bock, Joseph C.** A micromethod for the determination of urea nitrogen, 140, 519
- Bodansky, Meyer.** See *Levine and Bodansky*, 133, 193
- , **Duff, Virginia B., and McKinney, Margaret G.** The formation of creatine from glycoxyamine in the liver. Experiments with nephrectomized rats. Intestinal excretion and bacterial decomposition of creatine and creatinine, 140, 365
- Bodansky, Oscar.** The energy of activation of the hydrolysis of sodium β -glycerophosphate by bone phosphatase at optimal pH, 129, 197
- Bodine, Joseph Hall.** See *Allen, Boyd, and Bodine*, 143, 785
- Bohonos, Nestor.** See *Hutchings, Bohonos, Hegsted, Elvehjem, and Peterson*, 140, 681
- See *Hutchings, Bohonos, and Peterson*, 141, 521
- and **Peterson, W. H.** The chemistry of mold tissue. XVI. Isolation of fungus cerebrin from the mycelium of *Aspergillus sydowi*, 149, 295
- Bolling, Diana.** See *Block and Bolling*, 127, 685
- See *Block*, 128, 181
- See *Block and Bolling*, 129, 1
- 130, 365
- See *Jervis, Block, Bolling, and Kanze*, 134, 105
- See *Block, Jervis, Bolling, and Webb*, 134, 567
- Bollman, Jesse L.** See *Kendall, Flock, Bollman, and Mann*, 126, 697
- See *Flock, Hester, and Bollman*, 128, 153
- See *Flock, Ingle, and Bollman*, 129, 99
- and **Flock, Eunice V.** Pyruvate in working muscles of normal and vitamin B₁-deficient rats, 130, 565
- Bollman, Jesse L.—continued:**
- See *Flock and Bollman*, 136, 469
- 144, 571
- and **Flock, Eunice V.** Phosphocreatine and inorganic phosphate in working and resting muscles of rats, studied with radioactive phosphorus, 147, 155
- Bolomey, René A., and Allen, Frank Worthington.** The enzymic hydrolysis of ribonucleic acid and its relation to the structure, 144, 113
- Bonner, John F.** See *Hodge, Van Huysen, Bonner, and Van Voorhis*, 138, 451
- See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Bonsnes, Roy W.** See *du Vigneaud, Brown, and Bonsnes*, 141, 707
- See *White, Bonsnes, and Long*, 143, 447
- Borchers, Raymond, and Berg, Clarence P.** The effect of conditions of hydrolysis and of prolonged heating upon the optical rotation of sulfuric acid hydrolysates of zein, 142, 693
- , **Totter, John R., and Berg, Clarence P.** Threonine deficiency in hydrolysates of zein prepared by autoclaving, 142, 697
- , **Berg, Clarence P., and Whitman, Newton E.** Tryptophane metabolism. X. The effect of feeding *l*(-), *dl*-, and *d*(+)-tryptophane, *d*(-)- and *dl*- β -3-indolelactic acid, β -3-indolepyruvic acid, and *l*(-)-kynurenine upon the storage of liver glycogen and the urinary output of kynurenine acid, kynurenine, and total acetone bodies, 145, 657
- Borek, Ernest, and Waelsch, Heinrich.** Metabolism of methionine and its derivatives with tissue slices, 141, 99
- Borsook, Henry, and Dubnoff, Jacob W.** Methods for the determination of submicro quantities of total nitrogen, ammonia, amino nitrogen, amides, peptides, adenylic acid, and nitrates, 131, 163
- and —. The biological synthesis of hippuric acid *in vitro*, 132, 307

Borsook, Henry—*continued*:

- and **Dubnoff, Jacob W.** The formation of creatine from glycocyamine in the liver, 132, 559
- The oxidation-reduction potential of coenzyme I, 133, 629
- and **Dubnoff, Jacob W.** Creatine formation in liver and in kidney, 134, 635
- See **Dubnoff and Borsook**, 138, 381
- and **Dubnoff, Jacob W.** The formation of glycocyamine in animal tissues, 138, 389
- , —, **Lilly, John C.**, and **Marriott, William.** The formation of glycocyamine in man and its urinary excretion, 138, 405
- and —. The conversion of citrulline to arginine in kidney, 141, 717
- Bosse, M. D.** See **Axelrod, Gross, Bosse, and Swingle**, 148, 721
- Bott, P. A.**, and **Richards, A. N.** The passage of protein molecules through the glomerular membranes, 141, 291
- Quantitative studies of the composition of glomerular urine. XV. The concentration of sodium in glomerular urine of *Necturi*, 147, 653
- Bourdillon, Jaques.** An apparatus for the rapid and accurate determination of low osmotic pressures, 127, 617
- Bovarnick, Marianna R.** The formation of extracellular *d*(-)-glutamic acid polypeptide by *Bacillus subtilis*, 145, 415
- Substitution of heated asparagine-glutamate mixture for nicotinamide as a growth factor for *Bacterium dysenteriae* and other microorganisms, 148, 151
- Chemical and biological assays of the nicotinamide-like substance formed in heated mixtures of asparagine and glutamic acid, 149, 301
- Bowers, Russell V.**, **Outhouse, Edgar L.**, and **Forbes, J. C.** Phosphatase studies: the hydrolysis of aminoethyl-phosphate and β -glycerophosphate by fecal and kidney phosphatase, 132, 675

- Bowman, Donald E.** Some of the oxidation-reduction properties of the chori-
onic gonadotropic hormone, 137, 293
- Factors which greatly increase the activity of the phenolic hydroxyl group of *l*-tyrosine, 141, 877
- Boyd, Eldon M.** See **Clarke and Boyd**, 135, 691
- and **Clarke, Eleanor L.** The fractionation of cattle blood iodine with alcohol, 142, 619
- Species variation in normal plasma lipids estimated by oxidative micro-methods, 143, 131
- Boyd, G. E.** See **Allen, Boyd, and Bodine**, 143, 785
- Boyd, M. John**, and **Logan, Milan A.** Colorimetric determination of serine, 146, 279
- Boyd, William C.**, **Conn, John B.**, **Gregg, Donald C.**, **Kistiakowsky, G. B.**, and **Roberts, Richard M.** The heat of an antibody-antigen reaction, 139, 787
- Boyer, Paul D.**, **Shaw, James H.**, and **Phillips, Paul H.** Studies on manganese deficiency in the rat, 143, 417
- , **Lardy, Henry A.**, and **Phillips, Paul H.** The rôle of potassium in muscle phosphorylations, 146, 673
- , —, and —. Further studies on the rôle of potassium and other ions in the phosphorylation of the adenylic system, 149, 529
- Bradley, H. C.** See **Eder, Bradley, and Belfer**, 128, 551
- See **Bailey, Belfer, Eder, and Bradley**, 143, 721
- See **Belfer, Koran, Eder, and Bradley**, 147, 345
- Bradshaw, Phoebe J.** See **Blatherwick, Bradshaw, Ewing, Larson, and Sawyer**, 134, 549
- See **Larson, Blatherwick, Bradshaw, Ewing, and Sawyer**, 136, 1
- See **Blatherwick, Bradshaw, Ewing, and Sawyer**, 136, 615
- See **Larson, Blatherwick, Bradshaw, Ewing, and Sawyer**, 138, 353
- Brand, Elliott.** See **Brodie, Brand, and Leshin**, 130, 555

- Brand, Erwin, and Kassell, Beatrice. The photometric determination of tryptophane, tyrosine, diiodotyrosine, and thyroxine, 131, 489
- , Cahill, George F., and Kassell, Beatrice. Canine cystinuria. V. Family history of two cystinuric Irish terriers and cystine determinations in dog urine, 133, 431
- and Kassell, Beatrice. The determination of reducing groups with porphyrindin, with special reference to egg albumin, 133, 437
- and —. Absence of methionine in crystalline horse serum albumin, 141, 999
- and —. Photometric determination of arginine, 145, 359
- and —. Analysis and minimum molecular weight of β -lactoglobulin, 145, 365
- Brand, Florence C. See Block, 128, 181
- See Sperry and Brand, 137, 377
- and Sperry, Warren M. The determination of cerebrosides, 141, 545
- See Sperry, Brand, and Copenhagen, 144, 297
- See Sperry and Brand, 150, 315
- Branning, W. Sterry. See Handler and Dann, 145, 145
- Bratton, A. Calvin, and Marshall, E. K., Jr. A new coupling component for sulfanilamide determination, 128, 537
- Braun, Albert E. The effect of some inorganic plant nutrients on malt diastase activity, 145, 197
- Breuer, Rosalie, and Milltzer, Walter E. A micromethod for the determination of iron in blood, 126, 561
- Brewer, John I. See Weinhouse and Brewer, 143, 617
- Briggs, David R. The metaphosphoric acid-protein reaction, 134, 261
- Briggs, G. M., Jr. See Hegsted, Briggs, Elvehjem, and Hart, 140, 191
- , Mills, R. C., Elvehjem, C. A., and Hart, E. B. The effect of added cystine in purified rations for the chick, 144, 47
- Briggs, G. M., Jr.—continued:
- , Luckey, T. D., Elvehjem, C. A., and Hart, E. B. Studies on two chemically unidentified water-soluble vitamins necessary for the chick, 148, 163
- , —, Teply, L. J., Elvehjem, C. A., and Hart, E. B. Studies on nicotinic acid deficiency in the chick, 148, 517
- , —, Elvehjem, C. A., and Hart, E. B. The effectiveness of a mixture of arginine, glycine, and cystine in the prevention of the so called vitamin B₄ deficiency in the chick, 150, 11
- Brinkhous, K. M. See Seegers, Brinkhous, Smith, and Warner, 126, 91
- Brode, Wallace R. See Mowry, Brode, and Brown, 142, 671, 679
- Brodie, Bernard B., Brand, Elliott, and Leshin, Seymour. The use of bromide as a measure of extracellular fluid, 130, 555
- Brooks, H. J. See Andrews and Brooks, 138, 341
- Brooks, S. C. See Cunningham, Kirk, and Brooks, 139, 11, 21
- Brown, Andrea N. See Lowry, Hastings, Hull, and Brown, 143, 271
- See Lowry, McCay, Hastings, and Brown, 143, 281
- Brown, Barker H., and Lewis, Howard B. The metabolism of sulfur. XXVII. The distribution of sulfur in the ultrafiltrates of blood plasma, 138, 705
- and —. XXVIII. The cystine content and sulfur distribution of ultrafiltrates of plasma after the administration of *l*-cystine and *dl*-methionine to rabbits, 138, 717
- Brown, Elmer B. See Bina, Thomas, and Brown, 148, 111
- Brown, George Bosworth. See du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg, 131, 273
- See du Vigneaud, Chandler, Cohn, and Brown, 134, 787
- and du Vigneaud, Vincent. The synthesis of S-(β -amino- β -carboxyethyl)-homocysteine, 137, 611
- See du Vigneaud and Brown, 138, 151

Brown, George Bosworth—*continued*:

— and du Vigneaud, Vincent. The stereoisomeric forms of lanthionine, 140, 767

— and —. The effect of certain reagents on the activity of biotin, 141, 85

— See du Vigneaud, Brown, and Bonsnes, 141, 707

— See du Vigneaud, Brown, and Chandler, 143, 59

— See Kilmer, Armstrong, Brown, and du Vigneaud, 145, 495

Brown, Harold V. See Dunn, Frieden, Stoddard, and Brown, 144, 487

Brown, Herman, and Kolmer, John A. Studies on the chemical constitution of the antigenic substance in alcoholic tissue extracts concerned in the serum diagnosis of syphilis, 137, 525

Brown, J. B. See Shinowara and Brown, 134, 331

— See Mowry, Brode, and Brown, 142, 671, 679

Brown, Raymond A. See Emmett, Brown, and Kamm, 132, 467

— See Emmett, Peacock, and Brown, 135, 131

Brown, W. L. The threonine, serine, cystine, and methionine content of peanut proteins, 142, 299

Browne, J. S. L. See Maughan, Evelyn, and Browne, 126, 567

— See Karady, Selye, and Browne, 131, 717

— See Venning, Hoffman, and Browne, 146, 369

— See Hoffman, Kazmin, and Browne, 147, 259

— See Venning, Hoffman, and Browne, 148, 455

Brückmann, Gerhard, and Zondek, Samuel Georg. An improved method for the determination of non-hemin iron, 135, 23

Bruger, Maurice, and Member, Samuel. On the fractionation of iodine in blood, 148, 77

Bryan, W. Ray. See Knudson, Sturges, and Bryan, 128, 721

Buchanan, John M. See Solomon, Vennesland, Klemperer, Buchanan, and Hastings, 140, 171

— See Vennesland, Solomon, Buchanan, Cramer, and Hastings, 142, 371

— See Vennesland, Solomon, Buchanan, and Hastings, 142, 379

—, Hastings, A. Baird, and Nesbett, Frances B. Glycogen formation from pyruvate *in vitro* in the presence of radioactive carbon dioxide, 145, 715
—, —, and —. The rôle of carboxyl-labeled acetic, propionic, and butyric acids in liver glycogen formation, 150, 413

Buchanan, Oliver H. See Block and Buchanan, 136, 379

Bueding, Ernest. See Lipschitz and Bueding, 129, 333

— and Wortis, Herman. The stabilization and determination of pyruvic acid in the blood, 133, 585

—, Stein, Martin H., and Wortis, Herman. The formation of pyruvic acid following glucose ingestion in man, 137, 793

—, —, and —. Blood pyruvate curves following glucose ingestion in normal and thiamine-deficient subjects, 140, 697

— and Goldfarb, Walter. The effect of sodium fluoride and sodium iodoacetate on glycolysis in human blood, 141, 539

— and Goodhart, Robert. Removal of pyruvic acid from human blood *in vitro*, 141, 931

— and Goldfarb, Walter. Blood changes following glucose, lactate, and pyruvate injections in man, 147, 33

—, Fazekas, Joseph F., Herrlich, Herman, and Himwich, Harold E. Effect of insulin on pyruvic acid formation in depancreatized dogs, 148, 97

Buel, Florence. See Deuel and Hallman, 140, 545

Buell, Mary V. A method for ashing soft tissues preliminary to the determination of cations, 130, 357

Buell, Mary V.—continued:

- A new method for the isolation of crystalline adenine nucleotides, 150, 389

Buhs, Rudolf P. See *Scudi and Buhs*, 141, 451

- See *Scudi, Buhs, and Hood*, 142, 323

- See *Scudi and Buhs*, 143, 665
144, 599
146, 1

Bulger, Harold A., and Johns, Helen E.
The determination of plasma uric acid, 140, 427

Bull, Henry B. Viscosity of solutions of denatured and of native egg albumin, 133, 39

- Osmotic pressure of egg albumin solutions, 137, 143

Bullen, S. S. See *Bloor and Bullen*, 138, 727

Bullowa, Jesse G. M. See *Ratish, Bullowa, Ames, and Scudi*, 128, 279

Burk, Norval F. Osmotic pressure, molecular weight, and dissociation of *Limulus* hemocyanin, 133, 511

Burr, George O. See *Norris, Rusoff, Miller, and Burr*, 139, 199

- See *Barnes, Miller, and Burr*, 140, 233, 241, 247, 773

- See *Norris, Rusoff, Miller, and Burr*, 147, 273

- See *Barnes, Lundberg, Hanson, and Burr*, 149, 313

Burris, R. H. Distribution of isotopic nitrogen in *Azotobacter vinelandii*, 143, 509

- See *Wilson, Burris, and Coffee*, 147, 475

- , *Eppling, F. J., Waflin, H. B., and Wilson, P. W.* Detection of nitrogen fixation with isotopic nitrogen, 148, 349

Burton, Irving F. See *Cahill and Burton*, 132, 161

Buskirk, Harold H., and Delor, R. A.
The use of mylase P in the preparation of natural materials for microbiological pantothenic acid assay, 145, 707

Butler, Allan M. See *Talbot, Butler, and MacLachlan*, 132, 595

Butler, Allan M.—continued:

- See *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 134, 319

- See *Talbot, Butler, MacLachlan, and Jones*, 136, 365

- and *Cushman, Margaret.* An ascorbic acid-like reducing substance in the buffy layer of centrifuged oxalated blood, 139, 219

- , —, and *MacLachlan, E. A.* The determination of ascorbic acid in whole blood and its constituents by means of methylene blue; macro- and micromethods, 150, 453

Butler, R. E. See *Isbell, Wooley, Butler, and Seibell*, 139, 499

Butts, Joseph S. See *Deuel, Hallman, Greeley, Butts, and Halliday*, 133, 173

- and *Sinnhuber, Russell O.* Studies in amino acid metabolism. VI. The metabolism of *dl*-valine and *dl*-isovaline in the normal rat, 139, 963

- and —. VII. The metabolism of *l*(+)-arginine and *dl*-lysine in the normal rat, 140, 597

- See *Remmert and Butts*, 144, 41

Butz, Lewis W., and Hall, S. R. Some characteristics of the androgenic fractions from bull urine, 126, 265

C

Cadden, J. F., and Dill, L. V. Some properties of a polyphenoloxidase present in cell-free kidney extracts, 143, 105

Cahill, George F. See *Brand, Cahill, and Kassell*, 133, 431

Cahill, William M., and Jackson, Richard W. The proof of synthesis and the configurational relationships of abrine, 126, 29

- See *Jackson and Cahill*, 126, 37

- and *Jackson, Richard W.* Some observations on hypaphorine: racemization of its ester and properties of other derivatives, 126, 627

- See *Gordon, Cahill, and Jackson*, 131, 189

- and *Burton, Irving F.* Racemization of amino acids and dipeptides on acetylation with ketene, 132, 161

Cahill, William M.—*continued*:

- and Rudolph, Guilford G. The replaceability of *dl*-methionine in the diet of the rat with its α -keto acid analogue, 145, 201

Cain, C. K. See *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 147, 47

— See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365

— See *Katzman, Godfrid, Cain, and Doisy*, 148, 501

Cajori, F. A. The effect of various substances on the activity of purified yeast carboxylase, 143, 357

Caldwell, M. L. See *Little and Caldwell*, 142, 585

147, 229

Callan, Thomas P. See *Toennies and Callan*, 129, 481

Campbell, Dan H., and Fourt, Lyman. Immunochemistry of catalase, 129, 385

Campbell, H. L. See *Lanford, Campbell, and Sherman*, 137, 627

Campbell, Harold A., Roberts, Willard L., Smith, William K., and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. I. The preparation of hemorrhagic concentrates, 136, 47

—, Smith, William K., Roberts, Willard L., and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. II. The bioassay of hemorrhagic concentrates by following the prothrombin level in the plasma of rabbit blood, 138, 1

— and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. IV. The isolation and crystallization of the hemorrhagic agent, 138, 21

— See *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 142, 941

Campbell, W. Wesley. See *Greenberg, Campbell, and Murayama*, 136, 35

Cannan, R. Keith. See *Warner and Cannan*, 142, 725

Cannan, R. Keith—*continued*:

—, Palmer, Albert H., and Kibrick, Andre C. The hydrogen ion dissociation curve of β -lactoglobulin, 142, 803

Cardini, C. E. See *Marenzi and Cardini*, 147, 363, 371

Carlson, Loren. See *Marsh and Carlson*, 136, 69

Carne, Herbert O. See *MacKay, Wick, and Carne*, 132, 613

— See *MacKay, Carne, and Wick*, 133, 59

— See *MacKay, Barnes, Carne, and Wick*, 135, 157

— See *Wick, MacKay, Carne, and Mayfield*, 136, 237

— See *MacKay, Wick, Carne, and Barnum*, 138, 63

— See *MacKay, Carne, Wick, and Visscher*, 141, 889

Carpenter, F. H. See *Loring and Carpenter*, 150, 381

Carr, C. Jelleff, and Forman, Sylvan E. Sugar alcohols. XX. The fate of *d*-sorbitol, styrcitol, and *l*-sorbitol in the animal body, 128, 425

Carroll, W. R., and Stier, T. J. B. The nature of the stimulation of yeast respiration by chloroform-preserved cytochrome *c* extracts, 137, 787

Carter, Charles E. See *Warren and Carter*, 150, 267

Carter, Herbert E., Handler, Philip, and Melville, Donald B. Azlactones. I. Preparation of benzoyl- α -aminocrotonic acid azlactone and the conversion of allothreonine to threonine, 129, 359

— and Melville, Donald B. Synthesis and determination of the lipotropic activity of the betaine hydrochlorides of *dl*-serine, *dl*-threonine, and *dl*-allothreonine, 133, 109

— and Stevens, Carl M. Azlactones. II. Azlactone formation in glacial and in aqueous acetic acid and preparation of benzoyl- α -aminocrotonic acid azlactone II, 133, 117

—, Handler, Philip, and Stevens, Carl M. Azlactones. III. Acylation of amino acids in pyridine, 138, 619

Carter, Herbert E.—continued:

- and Stevens, Carl M. Benzoylation of amino acids, 138, 627
- , —, and Ney, Luman F. Azlactones. IV. Synthesis of α -amino- β -thiol-*n*-butyric acids, 139, 247
- and Risser, William C. Azlactones. V. Preparation of benzoyl- α -amino-cinnamic acid azlactones I and II. The use of β -phenethylamine in the purification of α -amino- β -methoxy (hydroxy) acids, 139, 255
- , Glick, Francis J., Norris, William P., and Phillips, George E. The structure of sphingosine, 142, 449
- and Norris, William P. Isolation of dihydrosphingosine from brain and spinal cord, 145, 709
- and Dickman, S. R. Anomalous amino nitrogen values, 149, 571
- Carter, Lawrence W. See Lough, Perlststein, Heinen, and Carter, 139, 487
- Cartland, George F. See Kuizenga, Wick, Ingle, Nelson, and Cartland, 147, 561
- Cason, James, and Anderson, R. J. The chemistry of the lipids of tubercle bacilli. LVI. The wax of the bovine tubercle bacillus, 126, 527
- Cattell, McKeen, and Civin, Helen. The influence of asphyxia and other factors on the serum potassium of cats, 126, 633
- Catterall, Alice. See Eichelberger and McLean, 142, 467
- Cawley, John D. See Gray and Cawley, 134, 397
- See Jensen, Shantz, Embree, Cawley, and Harris, 149, 473
- Chaffee, Eleanor. See Meyer and Chaffee, 133, 83
- 138, 491
- Chaikoff, I. L. See Entenman, Lorenz, and Chaikoff, 126, 133
- See Changus, Chaikoff, and Ruben, 126, 493
- See Lorenz, Chaikoff, and Entenman, 126, 763
- See Perlman and Chaikoff, 127, 211
- See Montgomery, Entenman, and Chaikoff, 128, 387

Chaikoff, I. L.—continued:

- See Jones, Chaikoff, and Lawrence, 128, 631
- See Perlman and Chaikoff, 128, 735
- See Entenman, Chaikoff, and Montgomery, 130, 121
- See Perlman and Chaikoff, 130, 593
- See Fries, Changus, and Chaikoff, 132, 23
- See Entenman, Lorenz, and Chaikoff, 133, 231
- See Jones, Chaikoff, and Lawrence, 133, 319
- See Perlman, Stillman, and Chaikoff, 133, 651
- See Entenman, Changus, Gibbs, and Chaikoff, 134, 59
- See Entenman, Lorenz, and Chaikoff, 134, 495
- See Entenman, Montgomery, and Chaikoff, 135, 329
- See Perlman, Stillman, and Chaikoff, 135, 359
- See Fries, Entenman, Changus, and Chaikoff, 137, 303
- See Montgomery, Entenman, Chaikoff, and Nelson, 137, 693
- See Entenman, Chaikoff, and Montgomery, 137, 699
- See Entenman and Chaikoff, 138, 477
- See Perlman, Chaikoff, and Morton, 139, 433
- See Perlman, Morton, and Chaikoff, 139, 449
- See Morton, Perlman, and Chaikoff, 140, 603
- See Fries and Chaikoff, 141, 469, 479
- See Fishler, Taurog, Perlman, and Chaikoff, 141, 809
- See Entenman and Chaikoff, 142, 129
- See Fries, Schachner, and Chaikoff, 144, 59
- See Morton and Chaikoff, 144, 565
- See Taurog, Chaikoff, and Perlman, 145, 281
- See Schachner, Fries, and Chaikoff, 146, 95
- See Morton and Chaikoff, 147, 1

Chaikoff, I. L.—continued:

- See *Sheline, Chaikoff, Jones, and Montgomery*, 147, 409
- See *Morton, Chaikoff, Reinhardt, and Anderson*, 147, 757
- See *Franklin and Chaikoff*, 148, 719
- See *Sheline, Chaikoff, Jones, and Montgomery*, 149, 139
- See *Fishler, Entenman, Montgomery, and Chaikoff*, 150, 47
- Chambers, William H.** See *Larson, Chambers, Blatherwick, Ewing, and Sawyer*, 129, 701
- , **Chandler, Joseph P., and Barker, S. B.** The metabolism of carbohydrate and protein during prolonged fasting, 131, 95
- Chandler, Joseph P.** See *du Vigneaud, Chandler, Moyer, and Keppel*, 131, 57
- See *Chambers, Chandler, and Barker*, 131, 95
- See *du Vigneaud, Chandler, Cohn, and Brown*, 134, 787
- and *du Vigneaud, Vincent.* The comparative action of choline and betaine in effecting the replacement of methionine by homocystine in the diet, 135, 223
- See *du Vigneaud, Chandler, and Moyer*, 139, 917
- See *du Vigneaud, Cohn, Chandler, Schenck, and Simmonds*, 140, 625
- See *du Vigneaud, Brown, and Chandler*, 143, 59
- See *Simmonds, Cohn, Chandler, and du Vigneaud*, 149, 519
- Changus, G. W., Chaikoff, I. L., and Ruben, S.** Radioactive phosphorus as an indicator of phospholipid metabolism. IV. The phospholipid metabolism of the brain, 126, 493
- See *Fries, Changus, and Chaikoff*, 132, 23
- See *Entenman, Changus, Gibbs, and Chaikoff*, 134, 59
- See *Fries, Entenman, Changus, and Chaikoff*, 137, 303

Chanutin, Alfred, and Ludewig, Stephan.

- The distribution of body water and electrolytes in the intact and partially nephrectomized rat after dehydration and hydration, 131, 519
- , **Ludewig, Stephan, and Masket, A. V.** Studies on the calcium-protein relationship with the aid of the ultracentrifuge. I. Observations on calcium caseinate solutions, 143, 737
- See *Ludewig, Chanutin, and Masket*, 143, 753
- See *Masket, Chanutin, and Ludewig*, 143, 763
- Chargaff, Erwin.** Unstable isotopes. I. The determination of radioactive isotopes in organic material, 128, 579
- II. The relative speed of formation of lecithin and cephalin in the body, 128, 587
- and **Cohen, Seymour S.** On lysophosphatides, 129, 619
- The configuration of glutamic and aspartic acids from pathogenic bacteria (*Phytomonas tumefaciens* and *Corynebacterium diphtheriae*), 130, 29
- A study of the spleen in a case of Niemann-Pick disease, 130, 503
- and **Ziff, Morris.** The compounds between phosphatides and basic proteins, 131, 25
- , —, and **Hogg, Bruce M.** The reaction between cephalin and hemoglobins, 131, 35
- , **Olson, Kenneth B., and Partington, Philip F.** The formation of phosphatides in the organism under normal and pathological conditions, 134, 505
- and **Keston, Albert S.** The metabolism of aminoethylphosphoric acid, followed by means of the radioactive phosphorus isotope, 134, 515
- , **Ziff, Morris, and Cohen, Seymour S.** The conversion of prothrombin to thrombin, followed by means of the radioactive phosphorus isotope, 135, 351
- See *Cohen and Chargaff*, 136, 243

Chargaff, Erwin—continued:

- , Ziff, Morris, and Cohen, Seymour S. Studies on the chemistry of blood coagulation. X. The reaction between heparin and the thromboplastic factor, 136, 257
- , See Ziff and Chargaff, 136, 689
- , Ziff, Morris, and Rittenberg, D. Determination of the bases of phospholipids by the isotope dilution method, 138, 439
- and —. Coagulation of fibrinogen by simple organic substances as a model of thrombin action, 138, 787
- , —, and Moore, Dan H. Studies on the chemistry of blood coagulation. XII. An electrophoretic study of the effect of anticoagulants on human plasma proteins, with remarks on the separation of the heparin complement, 139, 383
- , See Cohen and Chargaff, 139, 741
- , 140, 689
- and Ziff, Morris. Note on the isolation of serine from beef brain phosphatides, 140, 927
- , A study of lipoproteins, 142, 491
- , The formation of the phosphorus compounds in egg yolk, 142, 505
- , Ziff, Morris, and Rittenberg, D. A study of the nitrogenous constituents of tissue phosphatides, 144, 343
- , Note on the mechanism of conversion of β -glycerophosphoric acid into the α form, 144, 455
- , Moore, Dan H., and Bendich, Aaron. Ultracentrifugal isolation from lung tissue of a macromolecular protein component with thromboplastic properties, 145, 593
- and Sprinson, David B. The mechanism of deamination of serine by *Bacterium coli*, 148, 249
- and Bendich, Aaron. On the coagulation of fibrinogen, 149, 93
- Charles, A. F. See Jaques, Waters, and Charles, 144, 229
- Chase, Aurin M. The absorption spectrum of luciferin and oxidized luciferin, 150, 433

- Chen, Yen Ping, Freeman, Smith, and Ivy, A. C. The preparation of a concentrated fecal phosphatase and its effect on dogs and rats, 132, 445
- Cheney, L. C. See MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy, 130, 433
- , See MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy, 131, 357
- Cheng, Amber L. S. See Weatherby and Cheng, 148, 707
- Chesley, Leon C. The determination of thiocyanate in biological fluids, 140, 135
- Chinard, Francis P. See Hellerman, Chinard, and Deitz, 147, 443
- Cholnoky, L. See Zechmeister and Cholnoky, 135, 31
- Chou, Chi-Yuan. See Stein, Moore, Stamm, Chou, and Bergmann, 143, 121
- Chow, Bacon F. See Greep, van Dyke, and Chow, 133, 289
- Christensen, Bert E. See West, Christensen, and Rinehart, 132, 681
- , West, Edward* S., and Dimick, Keene P. A simple apparatus and procedure for determination of amino acids by the ninhydrin reaction, 137, 735
- Christensen, Halvor N. The contaminants of blood phospholipids, 129, 531
- , Synthesis of esters of phosphoric acid related to phosphatides, 135, 399
- and Hastings, A. Baird. Phosphatides and inorganic salts, 136, 387
- , See Ross and Christensen, 137, 89
- and Ross, William F. Carbon suboxide and proteins. II. The determination of malonic acid, 137, 101
- , Edwards, Raymond R., and Piersma, Henry D. The composition of gramicidin and tyrocidine, 141, 187
- Christensen, W. Blake, Johnson, Marvin J., and Peterson, W. H. Properties of the lactic acid-racemizing enzyme of *Clostridium butylicum*, 127, 421

- Christman, A. A. See *Roberts and Christman*, 145, 267
 —. See *Coryell and Christman*, 150, 143
- Christman, Clarence C. See *Tipson, Christman, and Levene*, 128, 609
 —. See *Ovakimian, Christman, Kuna, and Levene*, 134, 151
- Chu, H. I. See *Danielson, Chu, and Hastings*, 131, 243
- Civin, Helen. See *Cattell and Civin*, 126, 633
- Clark, Leland C., Jr. See *Kochakian and Clark*, 143, 795
- Clark, W. Mansfield, Taylor, John Fuller, Davies, T. Harrison, and Vestling, Carl S. Metalloporphyrins. I. Coordination with nitrogenous bases. Theoretical relations, 135, 543
 —. See *Taylor*, 135, 569
 — and Perkins, Marie E. Metalloporphyrins. V. Aspectrophotometric study of pyridine coproporphyrin I, 135, 643
- Clark, William G., Levitan, Nathan I., Gleason, Donald F., and Greenberg, Goodwin. Titrimetric microdetermination of chloride, sodium, and potassium in a single tissue or blood sample, 145, 85
- Clarke, Delphine H. See *Ralli, Clarke, and Kennedy*, 141, 105
- Clarke, Eleanor L., and Boyd, Eldon M. A seasonal study of the iodine content of the blood of birds, 135, 691
 —. See *Boyd and Clarke*, 142, 619
- Clarke, Florence, Solkot, Roy, and Corley, Ralph C. Metabolism of certain rare sugars, 131, 135
- Clarke, H. T., and Mazur, Abraham. The lipids of diatoms, 141, 283
 —. See *Mazur and Clarke*, 143, 39
- Clarke, Miriam F., Lechycka, Marie, and Light, Amos E. A supplementary growth factor for *Lactobacillus casei*, 142, 957
 —. See *Light and Clarke*, 147, 739
- Cleary, Robert V., Maier, John, and Hitchings, George H. The metabolism of chlorinated naphthalenes, 127, 403
- Clowes, G. H. A. See *Krahl, Keltch, and Clowes*, 136, 563
- Clutton, Roger F., Schoenheimer, Rudolf, and Rittenberg, D. Studies in protein metabolism. XII. The conversion of ornithine into arginine in the mouse, 132, 227
- Coburn, Alvin F. See *Kapp and Coburn*, 145, 549
 —. See *Dubos, Hotchkiss, and Coburn*, 146, 421
- Coffee, W. B. See *Wilson, Burris, and Coffee*, 147, 475
- Coffman, J. R., and Koch, F. C. The effect of testosterone propionate on induced creatinuria in rats, 135, 519
- Cohen, Dorothy L. See *Lowry, Smith, and Cohen*, 146, 519
- Cohen, Philip P., and Stark, Irene E. Hepatic ketogenesis and ketolysis in different species, 126, 97
 —. Transamination with purified enzyme preparations (transaminase), 136, 565
 —. Kinetics of transaminase activity, 136, 585
 — and Hekhuis, G. Leverne. Rate of transamination in normal tissues, 140, 711
 —. See *Albaum and Cohen*, 149, 19
- Cohen, Seymour S. See *Chargaff and Cohen*, 129, 619
 —. See *Chargaff, Ziff, and Cohen*, 135, 351
 — and *Chargaff, Erwin*. Studies on the chemistry of blood coagulation. IX. The thromboplastic protein from lungs, 136, 243
 —. See *Chargaff, Ziff, and Cohen*, 136, 257
 — and *Chargaff, Erwin*. Studies on the chemistry of blood coagulation. XIII. The phosphatide constituents of the thromboplastic protein from lungs, 139, 741
 — and —. The electrophoretic properties of the thromboplastic protein from lungs, 140, 689
 — and Stanley, W. M. The action of intestinal nucleophosphatase on tobacco mosaic virus, 142, 863

Cohen, Seymour S.—*continued*:

- The isolation and crystallization of plant viruses and other protein macro molecules by means of hydrophilic colloids, 144, 353
- and Stanley, W. M. The molecular size and shape of the nucleic acid of tobacco mosaic virus, 144, 589
- The electrophoretic mobilities of desoxyribose and ribose nucleic acids, 146, 471

Cohn, David J., Tannenbaum, Albert, Thalheimer, William, and Hastings, A. Baird. Influence of oxygen and carbon dioxide on the blood of normal and pneumonic dogs, 128, 109

Cohn, Gunther, and Koltzoff, I. M. Determination of calcium by precipitation with picrolonic acid and polarographic measurement of the residual picrolonic acid, 147, 705

- and —. Amperometric titration of picrolonic acid and indirect volumetric determination of calcium by precipitation as picrolonate and backtitration of the excess of picrolonic acid with methylene blue, 148, 711

Cohn, Mildred. See *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 131, 273

- See *du Vigneaud, Chandler, Cohn, and Brown*, 134, 787

—, Irving, George W., Jr., and *du Vigneaud, Vincent*. The amphoteric nature of the pressor principle of the posterior lobe of the pituitary gland, 137, 635

- See *du Vigneaud, Cohn, Chandler, Schenck, and Simmonds*, 140, 625

— See *Fishman and Cohn*, 148, 619

- See *Schenck, Simmonds, Cohn, Stevens, and du Vigneaud*, 149, 355

— See *Simmonds, Cohn, Chandler, and du Vigneaud*, 149; 519

Cohn, Waldo E. See *Joseph, Cohn, and Greenberg*, 128, 673

- and Greenberg, David M. Studies in mineral metabolism with the aid of artificial radioactive isotopes. III. The influence of vitamin D on the phosphorus metabolism of rachitic rats, 130, 625

Cohn, Waldo E.—*continued*:

- The determination of hemoglobin in tissue extracts or other turbid solutions, 148, 219

Cole, William H. See *Allison and Cole*, 135, 259

- See *Allison, Cole, Leatham, Nastuk, and Anderson*, 147, 255

Collier, H. Bruce, and Allen, Della. Inhibition of succinic dehydrogenase by phenothiazone, 140, 675

Colowick, Sidney P. See *Cori, Colowick, and Cori*, 127, 771

- , Welch, Mary S., and Cori, Carl F. Phosphorylation of glucose in kidney extract, 133, 359

—, —, and —. Glucose oxidation and phosphorylation, 133, 641

- , Kalckar, Herman M., and Cori, Carl F. Glucose phosphorylation and oxidation in cell-free tissue extracts, 137, 343

— and —. An activator of the hexokinase system, 137, 789

- See *Sutherland, Colowick, and Cori*, 140, 309

— and Sutherland, Earl W. Polysaccharide synthesis from glucose by means of purified enzymes, 144, 423

- and Kalckar, Herman M. The rôle of myokinase in transphosphorylations. I. The enzymatic phosphorylation of hexoses by adenylyl pyrophosphate, 148, 117

Conant, James B., Cramer, Richard D., Hastings, A. Baird, Klemperer, Friedrich W., Solomon, A. K., and Venesland, Birgit. Metabolism of lactic acid containing radioactive carboxyl carbon, 137, 557

Conger, Theodore W., and Elvehjem, C. A. The biological estimation of pyridoxine (vitamin B₆), 138, 555

Conn, John B. See *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 139, 787

- See *Tishler, Stokes, Trenner, and Conn*, 141, 197

Conner, R. T., Kao, Hsueh-Chung, and Sherman, H. C. Further studies on the relationship of the plane of protein intake to the rate of normal calcification during growth, 139, 835

- Connor, Edwin B. See *Kaye, Leibner, and Connor*, 132, 195
- Consolazio, F. See *Dill, Wilson, Hall, and Robinson*, 136, 449
- Consolazio, W. V., and Talbott, John H. Modification of the method of Shohl and Bennett for the determination of potassium in serum and urine, 126, 55
- and —. The determination of total base in biological material by electro-dialysis, 132, 753
- and Dill, D. B. The determination of sodium, 137, 587
- Conway, Catherine F. See *Young and Conway*, 142, 839
- Cook, E. V. See *Cullen and Cook*, 147, 23
- Cook, J. W. See *Dorfman, Cook, and Hamillon*, 130, 285
- Coolidge, Thomas B. A simple cataphoresis apparatus, 127, 551
- Chemistry of the van den Bergh reaction, 132, 119
- A simple ultrafiltration apparatus, 135, 541
- Coons, Albert H. See *Muus, Coons, and Salter*, 139, 135
- Cooper, Elizabeth. See *Schmidt, Hughes, Green, and Cooper*, 145, 229
- Cooper, Gerald R. See *Neurath and Cooper*, 135, 455
- See *Neurath, Cooper, and Erickson*, 138, 411
- See *Neurath, Cooper, Sharp, Taylor, Beard, and Beard*, 140, 293
- See *Sharp, Cooper, and Neurath*, 142, 203
- See *Neurath, Cooper, and Erickson*, 142, 249, 265
- See *Sharp, Cooper, Erickson, and Neurath*, 144, 139
- Copenhaver, Wilfred M. See *Sperry, Brand, and Copenhaver*, 144, 297
- Copp, D. Harold. See *Greenberg, Copp, and Cuthbertson*, 147, 749
- Corbet, Ruth E. See *Holmes and Corbet*, 127, 449
- Corcoran, A. C., and Page, Irvine H. Applications of diphenylamine in the determination of levulose in biological media. I. The determination of in-
- Corcoran, A. C.—continued:
ulin. II. The determination of levulose in small amounts of blood, 127, 601
- , Helmer, O. M., and Page, Irvine H. The determination of nicotine in urine, 129, 89
- Cori, Carl F. See *Cori, Colowick, and Cori*, 127, 771
- See *Cori, Cori, and Schmidt*, 129, 629
- See *Cori and Cori*, 131, 397
- See *Colowick, Welch, and Cori*, 133, 359, 641
- See *Cori and Cori*, 135, 733
- See *Colowick, Kalckar, and Cori*, 137, 343
- See *Bear and Cori*, 140, 111
- See *Sutherland, Colowick, and Cori*, 140, 309
- See *Green, Cori, and Cori*, 142, 447
- Cori, Gerty T., Colowick, Sidney P., and Cori, Carl F. The activity of the phosphorylating enzyme in muscle extract, 127, 771
- , Cori, Carl F., and Schmidt, Gerhard. The rôle of glucose-1-phosphate in the formation of blood sugar and synthesis of glycogen in the liver, 129, 629
- and —. The activating effect of glycogen on the enzymatic synthesis of glycogen from glucose-1-phosphate, 131, 397
- and —. The kinetics of the enzymatic synthesis of glycogen from glucose-1-phosphate, 135, 733
- See *Green, Cori, and Cori*, 142, 447
- See *Hassid, Cori, and McCready*, 148, 89
- Corley, Ralph C. See *Clarke, Solkot, and Corley*, 131, 135
- See *Visscher and Corley*, 147, 291
- Correll, John T., and Wise, E. C. Studies on the relative efficiency of vitamin D from several sources. I. Influence of vitamin D of different origins on bone ash and body weight of the chicken, 126, 573
- and —. II. Influence of vitamin D of different origins on the serum phosphatase of the chicken, 126, 581

- Corsaro, Joseph F., Mangun, George H., and Myers, Victor C. Comparative creatine concentration of three voluntary muscles in seventy-four autopsy cases, 135, 407
- Coryell, Charles D., and Pauling, Linus. A structural interpretation of the acidity of groups associated with the hemes of hemoglobin and hemoglobin derivatives, 132, 769
- See Michaelis, Coryell, and Granick, 148, 463
- Coryell, Margaret Nalder, and Christman, A. A. The utilization of lactose by the fasting white rat, 150, 143
- Cox, R. P. See Quackenbush, Cox, and Steenbock, 145, 169
- Cox, Warren M., Jr. See Mueller, Kemmerer, Cox, and Barnes, 134, 573
- Cox, William W. See Wendel, Wendel, and Cox, 131, 177
- and Wendel, William B. The normal rate of reduction of methemoglobin in dogs, 143, 331
- Craig, Francis N. See Beecher, Follansbee, Murphy, and Craig, 146, 197
- See Beecher and Craig, 148, 383
- The effect of anoxia on the metabolism of liver slices from fed and fasted rats, 150, 209
- Craig, Lyman C. See Jacobs and Craig, 127, 361
- 128, 431
- See Jacobs, Elderfield, and Craig, 128, 439
- See Jacobs and Craig, 128, 715
- and Jacobs, Walter A. The veratrine alkaloids. V. The selenium dehydrogenation of cevine, 129, 79
- and —. VII. On decevinic acid, 134, 123
- See Jacobs and Craig, 136, 303, 323
- and Jacobs, Walter A. The veratrine alkaloids. VIII. Further studies on the selenium dehydrogenation of cevine, 139, 263
- , —, and Lavin, George I. The veratrine alkaloids. IX. The nature of the hydrocarbons from the dehydrogenation of cevine, 139, 277
- Craig, Lyman C.—continued:
- and Jacobs, Walter A. The veratrine alkaloids. X. The structure of cevanthridine, 139, 293
- See Jacobs, Craig, and Lavin, 141, 51
- See Jacobs and Craig, 141, 67
- and Jacobs, Walter A. The veratrine alkaloids. XII. Further studies on the oxidation of cevine, 141, 253
- and —. XIII. The dehydrogenation of protoveratrine, 143, 427
- See Jacobs and Craig, 143, 589, 605
- and Jacobs, Walter A. The aconite alkaloids. X. On napelline, 143, 611
- See Gould, Craig, and Jacobs, 145, 487
- See Jacobs and Craig, 147, 567, 571
- 148, 41, 51
- and Jacobs, Walter A. The veratrine alkaloids. XVII. On germine. Its formulation and degradation, 148, 57
- See Jacobs and Craig, 149, 271
- and Jacobs, Walter A. The veratrine alkaloids. XX. Further correlations in the veratrine group. The relationship between the veratrine bases and solanidine, 149, 451
- Identification of small amounts of organic compounds by distribution studies. Application to atabrine, 150, 33
- Cramer, Frank B., Jr., and Winnick, Theodore. Amino acid nitrogen of normal human plasma, 150, 259
- Cramer, Richard D., and Kistiakowsky, G. B. The synthesis of radioactive lactic acid, 137, 549
- See Conant, Cramer, Hastings, Klemperer, Solomon, and Vennesland, 137, 557
- See Vennesland, Solomon, Buchanan, Cramer, and Hastings, 142, 371
- Crandall, Lathan A., Jr. A method for acetone bodies in blood, applicable to the determination of small amounts of mercury, 133, 539
- The form in which acetone bodies are produced by the liver, 135, 139

Crandall, Lathan A., Jr.—continued:

- A comparison of ketosis in man and dog, 138, 123
- See *Winter and Crandall*, 140, 97
- Creighton, M. M.** See *Anderson and Creighton*, 129, 57
- 130, 429
- 131, 549
- See *Anderson, Creighton, and Peck*, 133, 675
- See *Anderson, Peck, and Creighton*, 136, 211
- Cullen, S. C., and Cook, E. V.** Solubility of nitrous oxide in human blood, 147, 23
- Cunningham, Burris.** See *Sisco, Cunningham, and Kirk*, 139, 1
- **Kirk, Paul L., and Brooks, S. C.** Quantitative drop analysis. XIV. Potentiometric determination of chloride, 139, 11
- —, and —. XV. Determination of potassium, 139, 21
- See *Sandkuhle, Kirk, and Cunningham*, 146, 427
- Cushman, Margaret.** See *Butler and Cushman*, 139, 219
- See *Butler, Cushman, and MacLachlan*, 150, 453
- Cuthbert, F. P.** See *Gray, Ivy, and Cuthbert*, 128, 173
- Cuthbertson, Elizabeth M.** See *Greenberg and Cuthbertson*, 145, 179
- See *Greenberg, Copp, and Cuthbertson*, 147, 749

D

- Dakin, H. D.** The formation of betaine from hydroxyamino acids on methylation, 140, 847
- On methylaspartic acids and their methylation, 141, 945
- On lysine and ornithine, 146, 237
- Danielson, Irvin S., and Hastings, A. Baird.** A method for determining tissue carbon dioxide, 130, 349
- **Chu, H. I., and Hastings, A. Baird.** The pK'_1 of carbonic acid in concentrated protein solutions and muscle, 131, 243
- Dann, W. J., and Kohn, Henry I.** The factor V (coenzymes I and II) content of rat tissues: evidence for synthesis of nicotinic acid by the rat, 136, 435
- and **Handler, Philip.** The quantitative estimation of nicotinic acid in animal tissues, 140, 201
- See *Handler and Dann*, 140, 739
- and **Handler, Philip.** Synthesis of nicotinic acid by the chick embryo, 140, 935
- The synthesis of nicotinic acid by the rat, 141, 803
- See *Handler and Dann*, 145, 145
- 146, 357
- Danowski, Thaddeus S.** The transfer of potassium across the human blood cell membrane, 139, 693
- Darby, Hugh H.** Ultraviolet absorption spectrum of papain, 139, 721
- See *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 145, 503
- Darby, William J., and Day, Paul L.** Blood sugar levels in rats receiving the cataractogenic sugars galactose and xylose, 133, 503
- and **Lewis, Howard B.** Urocanic acid and the intermediary metabolism of histidine in the rabbit, 146, 225
- Darling, Sven.** See *Astrup and Darling*, 133, 761
- Darrow, Daniel C., Harrison, Harold E., and Taffel, Max.** Tissue electrolytes in adrenal insufficiency, 130, 487
- See *Yannet and Darrow*, 134, 721
- Davies, Dean F.** See *Free, Davies, and Myers*, 147, 167
- Davies, T. Harrison.** See *Clark, Taylor, Davies, and Vestling*, 135, 543
- Metalloporphyrins. III. Coordination of nitrogenous bases with iron meso-, proto-, and hematoporphyrins, 135, 597
- Davis, Adelle.** See *Deuel and Davis*, 146, 649
- Davis, Bernard D., Hollaender, Alexander, and Greenstein, Jesse P.** Electrophoretic patterns, colloid osmotic pressure, and viscosity of serum denatured by ultraviolet radiation, 146, 663

- Davis, G. K. See *Hale, Davis, and Baldwin*, 146, 553, 565
- Davis, Orris L. See *Lingane and Davis*, 137, 567
- Davis, W. W. See *Plentl, Page, and Davis*, 147, 143
- Davison, Wilburt C. Relation of the concentration of starch suspensions to their viscosity, 144, 419
- Dawson, Martin H. See *Meyer, Smyth, and Dawson*, 128, 319
- Day, Harry G., and McCollum, E. V. Mineral metabolism, growth, and symptomatology of rats on a diet extremely deficient in phosphorus, 130, 269
- See *Shils, Day, and McCollum*, 139, 145
- Day, Paul L. See *Darby and Day*, 133, 503
- See *Totter and Day*, 147, 257
- Dean, R. B. The determination of chloride in single isolated muscle fibers, 137, 113
- and Fishman, M. M. Determination of chloride and base in the same tissue sample, 140, 807
- De Falco, Ralph J. See *Arnow, Kazal, and De Falco*, 145, 347
- Deitz, Victor R. See *Hellerman, Chinard, and Deitz*, 147, 443
- Delor, R. A. See *Buskirk and Delor*, 145, 707
- Dennis, Joe. See *Hendrix and Dennis*, 126, 315
- Dessauer, Gerhard. See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Deuber, Carl G. See *Vickery, Pucher, and Deuber*, 145, 45
- Deuel, Harry J., Jr. See *Halliday, Deuel, Tragerman, and Ward*, 132, 171
- , Hallman, Lois F., Greeley, Paul O., Butts, Joseph S., and Halliday, Nellie. Studies on ketosis. XVII. The rate of disappearance of β -hydroxybutyric acid in fasted and fed rats, 133, 173
- See *Blunden, Hallman, Morehouse, and Deuel*, 135, 757
- See *Harper and Deuel*, 137, 233
- Deuel, Harry J., Jr.—continued:
- , Halliday, Nellie, Hallman, Lois, Johnston, Cornelia, and Miller, Albert J. The effect of vitamin A intake on vitamin A content of butter fat, 139, 479
- and Hallman, Lois F. Studies on ketosis. XIX. Further studies on endogenous ketonuria in the rat, 140, 545
- See *Halliday and Deuel*, 140, 555
- See *Bobbitt and Deuel*, 143, 1
- and Davis, Adelle. The sexual variation in carbohydrate metabolism. X. The comparative glucose tolerance of normal rats and those with fatty livers, 146, 649
- See *Johnston and Deuel*, 149, 117
- Deutsch, H. F., Kline, B. E., and Rusch, H. P. The oxidation of phospholipids in the presence of ascorbic acid and carcinogenic chemicals, 141, 529
- Devlin, Henry B. See *Orten and Devlin*, 136, 461
- and Mattill, H. A. The chemical determination of tocopherols in muscle tissue, 146, 123
- DeWitt, James B. See *Sure and DeWitt*, 126, 287
- Dick, George F. See *Barron, Dick, and Lyman*, 137, 267
- Dicken, Dorothy M. See *Landy and Dicken*, 146, 109
- Dickman, S. R. See *Carter and Dickman*, 149, 571
- Dill, D. B., Wilson, J. W., Hall, F. G., and Robinson, Sid. Properties of the blood of Negroes and Whites in relation to climate and season, 136, 449
- See *Consolazio and Dill*, 137, 587
- Dill, L. V. See *Cadden and Dill*, 143, 105
- Dillon, Robert T. See *Van Slyke, Dillon, MacFadyen, and Hamilton*, 141, 627
- See *Van Slyke, Hiller, and Dillon*, 146, 137
- Dimick, Keene P. See *Christensen, West, and Dimick*, 137, 735
- A quantitative method for the determination of tyrothricin, 149, 387

- Dimler, Robert J. See *Lohmar, Dimler, Moore, and Link*, 143, 551
- and Link, Karl Paul. The characterization of lactic acid as the benzimidazole derivative, 143, 557
- and —. Carbohydrate characterization. IV. Identification of *d*-ribose, *l*-fucose, and *d*-digitoxose as benzimidazole derivatives, 150, 345
- Di Somma, August A. The constitution of conjugated phenolphthalein formed in the animal body, 133, 277
- Divine, J. P. See *Jones, Divine, and Horro*, 146, 571
- Dohan, Janetta Schoonover, and Woodward, Gladys E. Electrolytic reduction and determination of oxidized glutathione, 129, 393
- . Glycolic acid oxidase, 135, 793
- . See *Woodward, Reinhart, and Dohan*, 138, 677
- Doherty, David G., Stein, William H., and Bergmann, Max. Aromatic sulfonic acids as reagents for amino acids, 135, 487
- . See *Behrens, Doherty, and Bergmann*, 136, 61
- , Tietzman, Josephine E., and Bergmann, Max. Peptides of dehydrogenated amino acids, 147, 617
- Doisy, E. A., Jr., Huffman, Max N., Thayer, Sidney A., and Doisy, Edward A. Solubilities of some estrogens, 138, 283
- and Westerfeld, W. W. The relationship of acetoin to metabolic acetylations, 149, 229
- Doisy, Edward A. See *Westerfeld, Thayer, MacCorquodale, and Doisy*, 126, 181
- . See *Westerfeld, MacCorquodale, Thayer, and Doisy*, 126, 195
- . See *Binkley, MacCorquodale, Thayer, and Doisy*, 130, 219
- . See *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 130, 431
- . See *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 130, 433
- . See *McKee, Binkley, Thayer, MacCorquodale, and Doisy*, 131, 327
- Doisy, Edward A.—continued:
- . See *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 131, 357
- . See *Huffman, Thayer, and Doisy*, 133, 567
- . See *Binkley, McKee, Thayer, and Doisy*, 133, 721
- . See *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 134, 591
- . See *Doisy, Huffman, Thayer, and Doisy*, 138, 283
- . See *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 147, 47
- . See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365
- . See *Katzman, Godfrid, Cain, and Doisy*, 148, 501
- Dolan, Margery. See *Sinclair and Dolan*, 142, 659
- Dorfman, Albert. See *Saunders, Dorfman, and Koser*, 138, 69
- , Berkman, Sam, and Koser, Stewart A. Pantothenic acid in the metabolism of *Proteus morganii*, 144, 393
- Dorfman, Ralph I., Cook, J. W., and Hamilton, James B. Conversion by the human of the testis hormone, testosterone, into the urinary androgen, androsterone, 130, 285
- . Conversion of etioallocholan-3,17-dione into androsterone, 132, 457
- and Hamilton, James B. Concerning the metabolism of testosterone to androsterone, 133, 753
- and Fish, William R. The conversion of testosterone into etioallocholanol-3(β)-17-one, 135, 349
- . See *Fish and Dorfman*, 140, 83
- . See *Fish, Dorfman, and Young*, 143, 715
- Doster-Virtue, Mildred E. See *Virtue and Doster-Virtue*, 126, 141
- , 127, 431
- , 128, 665
- , 133, 573
- , 137, 227

- Doudoroff, M., Kaplan, N., and Hassid, W. Z. Phosphorolysis and synthesis of sucrose with a bacterial preparation, 148, 67
- Dounce, Alexander L. See *Sumner and Dounce*, 127, 439
- See *Sumner, Dounce, and Frampton*, 136, 343
- An improved method for recrystallizing urease, 140, 307
- Further observations concerning the preparation and properties of catalase from different sources. I. Crystalline lamb liver catalase. II. Preparation of crystalline beef liver catalase by use of acetone or alcohol, 143, 497
- Enzyme studies on isolated cell nuclei of rat liver, 147, 685
- Dow, R. B. See *Matthews, Dow, and Anderson*, 135, 697
- See *Lauffer and Dow*, 140, 509
- Drabkin, David L., and Singer, Richard B. Spectrophotometric studies. VI. A study of the absorption spectra of non-hemolyzed erythrocytes and of scattering of light by suspensions of particles, with a note upon the spectrophotometric determination of the pH within the erythrocyte, 129, 739
- Spectrophotometric studies. VII. The establishment of precise spectrophotometric constants for cytochrome c and hemin derivatives, upon an iron basis, 140, 373
- VIII. The microdetermination of iron in cytochrome c and hemin preparations, 140, 387
- IX. The reaction of cyanide with nitrogenous derivatives of ferriprotophyrin, 142, 855
- X. Structural interpretation of the spectra of cyanide, pyridine, and carbon monoxide derivatives of cytochrome c and hemoglobin, 146, 605
- See *Rosenthal and Drabkin*, 149, 437
150, 131
- Drake, B. B., Smythe, C. V., and King, C. G. Complexes of dehydroascorbic acid with three sulphydryl compounds, 142, 80
- Drekter, Leon. See *Truhlar, Drekter, McGuire, and Falk*, 127, 345
- Drew, Charles R. See *Smith, Tuthill, Drew, and Scudder*, 133, 499
- Drinker, Nancy, Green, Arda Alden, and Hastings, A. Baird. Equilibria between calcium and purified globulins, 131, 641
- and Zinsser, Hans H. The equilibrium between calcium and cephalin in various systems, 148, 187
- Drury, Douglas R. See *Wick and Drury*, 138, 129
- See *Pauls and Drury*, 145, 481
- Dubnoff, Jacob W. See *Borsook and Dubnoff*, 131, 163
132, 307, 559
134, 635
- and Borsook, Henry. A micromethod for the determination of glycoeyamine in biological fluids and tissue extracts, 138, 381
- See *Borsook and Dubnoff*, 138, 389
- See *Borsook, Dubnoff, Lilly, and Marriott*, 138, 405
- A micromethod for the determination of arginine, 141, 711
- See *Borsook and Dubnoff*, 141, 717
- DuBois, Delafield. An apparatus for the study of rapid chemical reactions, 137, 123
- See *Stern and Melnick*, 139, 301
- DuBois, K. P. See *Moxon, Schaefer, Lardy, DuBois, and Olson*, 132, 785
- See *Potter and DuBois*, 142, 417
- and Potter, V. R. The preparation of hexose diphosphate, hexose monophosphate, and phosphoglyceric acid, 147, 41
- , Albaum, H. G., and Potter, V. R. Adenosine triphosphate in magnesium anesthesia, 147, 699
- and Potter, V. R. Activation of the adenosinetriphosphatase system by acetylcholine, 148, 451
- and —. The assay of animal tissues for respiratory enzymes. III. Adenosinetriphosphatase, 150, 185
- Dubos, René J. See *Hotchkiss and Dubos*, 132, 791, 793
136, 803
141, 155

Dubos, René J.—*continued*:

- See *Lipmann, Hotchkiss, and Dubos*, 141, 163
- , *Hotchkiss, Rollin D., and Coburn, Alvin F.* The effect of gramicidin and tyrocidine on bacterial metabolism, 146, 421
- Duff, Virginia B.* See *Bodansky, Duff, and McKinney*, 140, 365
- Duffendack, O. S., Thomson, K. B., Lee, William C., and Koppius, O. G.* A method for the quantitative spectrochemical analysis of very small amounts of biological materials for sodium, potassium, calcium, magnesium, and lead, 126, 1
- Dunbar, P.* See *Goettsch, Lytle, Grim, and Dunbar*, 144, 121
- Dunn, Max S., and Porush, Irving.* Quantitative investigations of amino acids and peptides. V. The function of iodine in amino nitrogen analyses by the nitrous acid method, 127, 261
- See *Redemann and Dunn*, 130, 341
- See *Stoddard and Dunn*, 142, 329
- , *Frieden, Edward H., Stoddard, M. Palmer, and Brown, Harold V.* Quantitative investigations of amino acids and peptides. IX. Some physical properties of *l*(-)-histidine, 144, 487
- See *Shankman, Dunn, and Rubin*, 150, 477
- Dyer, Helen M.* See *Kies, Dyer, Wood, and du Vigneaud*, 128, 207
- See *du Vigneaud, Dyer, and Kies*, 130, 325
- van Dyke, H. B.* See *Greep, van Dyke, and Chow*, 133, 289

E

- Eadie, G. S.* The inhibition of cholinesterase by morphine *in vitro*, 138, 597
- The inhibition of cholinesterase by physostigmine and prostigmine, 146, 85
- Eakin, Robert E., Snell, Esmond E., and Williams, Roger J.* A constituent of raw egg white capable of inactivating biotin *in vitro*, 136, 801
- Eakin, Robert E.*—*continued*:
- , *Snell, Esmond E., and Williams, Roger J.* The concentration and assay of avidin, the injury-producing protein in raw egg white, 140, 535
- Eastcott, Edna V.* See *Rae and Eastcott*, 129, 255
- 136, 443
- Eck, John C., and Thomas, Byron H.* The chemical activation of sterols. V. A study of the relationship between chemical activation and configuration of various sterols and derivatives, 128, 257
- and —. VI. A study of various reagents in chemical activation and in sterol color reactions, 128, 267
- Ecker, E. E., Pillemer, L., Jones, Chase Breese, and Seifter, S.* Separation of complement from fresh guinea pig serum, 135, 347
- See *Pillemer and Ecker*, 137, 139
- Eckert, H. William.* Determination of *p*-aminobenzoic acid, conjugated *p*-aminobenzoic acid, and *p*-nitrobenzoic acid in blood, 148, 197
- A new micro colorimetric method for the determination of tryptophane, 148, 205
- Eckstein, H. C.* See *Tucker and Eckstein*, 126, 117
- See *Treadwell and Eckstein*, 128, 373
- See *Tucker, Treadwell, and Eckstein*, 135, 85
- See *Singal and Eckstein*, 140, 27
- See *Treadwell and Eckstein*, 140, 35
- See *Treadwell, Groothuis, and Eckstein*, 142, 653
- Eder, Howard, Bradley, H. C., and Belfer, Samuel.* The survival of cathepsin in autolysis, 128, 551
- See *Bailey, Belfer, Eder, and Bradley*, 143, 721
- See *Belfer, Koran, Eder, and Bradley*, 147, 345
- Edman, P. V.* A micromethod for the estimation of cerebrosides in nerve tissue, 143, 219
- Edsall, John T.* See *Greenstein and Edsall*, 133, 397

Edsall, John T.—continued:

- and Mehl, John W. The effect of denaturing agents on myosin. II. Viscosity and double refraction of flow, 133, 409
- Edson, M., and Heard, R. D. H.** Hydrolysis of the conjugated estrogens in the urine of pregnant mares, 130, 579
- Edwards, G. A.** See *Scholander, Edwards, and Irving*, 148, 495
- , **Scholander, P. F., and Roughton, F. J. W.** Micro gasometric estimation of the blood gases. III. Nitrogen, 148, 565
- Edwards, Raymond R.** See *Christensen, Edwards, and Piersma*, 141, 187
- Egafña, Enrique, and Meiklejohn, Arnold P.** The estimation of thiamine in urine, 141, 859
- Eichelberger, Lillian.** The distribution of body water in skeletal muscle in dogs with impaired renal function, 128, 137
- and **Bibler, Walter G.** Water and electrolyte content of normal and hydronephrotic kidneys, 132, 645
- , **Fetcher, E. S., Jr., Geiling, E. M. K., and Vos, B. J., Jr.** The distribution of water and electrolytes in the blood of dolphins (*Tursiops truncatus*), 133, 145
- , **Geiling, E. M. K., and Vos, B. J., Jr.** The distribution of water and electrolytes in skeletal muscle of the dolphin (*Tursiops truncatus*), 133, 661
- , **Fetcher, E. S., Jr., Geiling, E. M. K., and Vos, B. J., Jr.** The composition of dolphin milk, 134, 171
- The distribution of body water in skeletal muscle and liver in normal dogs following injections of potassium salts, 138, 583
- The distribution of body water and electrolytes in skeletal muscle of dogs with experimental hydronephrosis following injections of potassium salts, 140, 467
- and **McLean, Franklin C.** The distribution of calcium and magnesium between the cells and the extra-cellular fluids of skeletal muscle and liver in dogs, 142, 467
- Eiler, John J., Stockholm, M., and Althausen, T. L.** The effect of the rate of absorption of glucose on the phosphates in the intestinal mucosa, 134, 283
- See *Allen and Eiler*, 137, 757
- Eisenman, Anna J., Ott, Lawrence, Smith, Paul K., and Winkler, Alexander W.** A study of the permeability of human erythrocytes to potassium, sodium, and inorganic phosphate by the use of radioactive isotopes, 135, 165
- See *Smith, Eisenman, and Winkler*, 141, 555
- Elam, Daniel W.** See *Norris and Elam*, 134, 443
- See *Lundgren, Elam, and O'Connell*, 149, 183
- Elderfield, Robert C.** See *Jacobs, Elderfield, and Craig*, 128, 439
- Elgart, Samuel, and Nelson, Norton.** Elimination of acetoacetic acid in the determination of pyruvic acid by Lu's method, 138, 443
- Ellenberg, Max.** See *Adlersberg and Ellenberg*, 128, 379
- Elliott, F. H.** See *Elliott and Elliott*, 127, 457
- Elliott, K. A. C., and Elliott, F. H.** The influence of some intermediary metabolites and salts on the respiration of liver tissue suspensions, 127, 457
- and **Libet, B.** Oxidation of glycogen by brain suspensions, 136, 797
- and —. Studies on the metabolism of brain suspensions. I. Oxygen uptake, 143, 227
- , **Scott, D. B. McNair, and Libet, B.** Studies on the metabolism of brain suspensions. II. Carbohydrate utilization, 146, 251
- Ellis, Fred W., and Krantz, John C., Jr.** Sugar alcohols. XXII. Metabolism and toxicity studies with mannitol and sorbitol in man and animals, 141, 147

- Ellis, Gordon.** See *Voris, Ellis, and Maynard*, 133, 491
- Ellis, N. R.** See *Riemenschneider, Ellis, and Titus*, 126, 255
- Ellis, Sydney, and Walker, Burnham S.** The action of hippuricase on ring-substituted derivatives of hippuric acid, 142, 291
- Ells, Victor R.** See *Uber and Ells*, 141, 229
- Elman, Robert.** See *White and Elman*, 143, 797
- d'Elseaux, Frank C., Blackwood, Frances C., Palmer, Lucille E., and Sloman, Katherine G.** Acid-base equilibrium in the normal, 144, 529
- Elvehjem, C. A.** See *Potter, Elvehjem, and Hart*, 126, 155
- See *Bird, Oleson, Elvehjem, and Hart*, 126, 671
- See *Oleson, Bird, Elvehjem, and Hart*, 127, 23
- See *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 127, 411
- See *Frost and Elvehjem*, 128, 23
- See *Kohler, Elvehjem, and Hart*, 128, 501
- See *Woolley, Waisman, and Elvehjem*, 129, 673
- See *Hegsted, Oleson, Elvehjem, and Hart*, 130, 423
- See *Axelrod and Elvehjem*, 131, 77
- See *Axelrod, Madden, and Elvehjem*, 131, 85
- See *Black, Frost, and Elvehjem*, 132, 65
- See *Nielsen, Oleson, and Elvehjem*, 133, 637
- See *Anderson and Elvehjem*, 134, 217
- See *Hore, Elvehjem, and Hart*, 134, 425
- See *Sober, Lipton, and Elvehjem*, 134, 605
- See *Axelrod, Sober, and Elvehjem*, 134, 749
- See *Wagner, Axelrod, Lipton, and Elvehjem*, 136, 357
- See *Hore, Elvehjem, and Hart*, 136, 425
- See *Lipton and Elvehjem*, 136, 637
- Elvehjem, C. A.—continued:**
- See *Wachtel, Hove, Elvehjem, and Hart*, 138, 361
- See *Hegsted, Mills, Elvehjem, and Hart*, 138, 459
- See *Conger and Elvehjem*, 138, 555
- See *Axelrod, Spies, and Elvehjem*, 138, 667
- See *Hegsted, Hier, Elvehjem, and Hart*, 139, 863
- See *Hegsted, Briggs, Elvehjem, and Hart*, 140, 191
- See *Hutchings, Bohonos, Hegsted, Elvehjem, and Peterson*, 140, 681
- See *Axelrod and Elvehjem*, 140, 725
- See *Axelrod, Swingle, and Elvehjem*, 140, 931
- See *Katzenelbogen, Axelrod, and Elvehjem*, 141, 611
- See *McKibbin, Schaefer, Frost, and Elvehjem*, 142, 77
- See *Axelrod, Potter, and Elvehjem*, 142, 85
- See *Schaefer, McKibbin, and Elvehjem*, 143, 321
- See *Briggs, Mills, Elvehjem, and Hart*, 144, 47
- See *Nielsen and Elvehjem*, 144, 405
- See *Schaefer, McKibbin, and Elvehjem*, 144, 679
- See *McKibbin, Schaefer, Elvehjem, and Hart*, 145, 107
- See *Black, Overman, Elvehjem, and Link*, 145, 137
- See *Pilgrim, Axelrod, and Elvehjem*, 145, 237
- See *Axelrod, Swingle, and Elvehjem*, 145, 297
- See *Swingle, Axelrod, and Elvehjem*, 145, 581
- See *Nielsen and Elvehjem*, 145, 713
- See *Briggs, Luckey, Elvehjem, and Hart*, 148, 163
- See *Field, Elvehjem, and Juday*, 148, 261
- See *Briggs, Luckey, Teply, Elvehjem, and Hart*, 148, 517
- See *Briggs, Luckey, Elvehjem, and Hart*, 150, 11
- See *Spector, Maass, Michaud, Elvehjem, and Hart*, 150, 75

- Embree, Norris D. The occurrence of cyclized vitamin A in fish liver oils, 128, 187
- and Shantz, Edgar M. Cyclization of vitamin A₂, 132, 619
- See *Jensen, Shantz, Embree, Cawley, and Harris*, 149, 473
- Emerson, Gladys A. See *Emerson, Emerson, and Evans*, 131, 409
- See *Mohammad, Emerson, Emerson, and Evans*, 133, 17
- Emerson, Oliver H., Emerson, Gladys A., and Evans, Herbert M. The vitamin E activity of α -tocoquinone, 131, 409
- See *Mohammad, Emerson, Emerson, and Evans*, 133, 17
- Emmett, A. D., Brown, R. A., and Kamm, Oliver. Comparison of the antihemorrhagic activity of natural and synthetic vitamin K₁ with the proposed standard 2-methyl-1,4-naphthoquinone, 132, 467
- , Kamm, Oliver, and Sharp, E. A. The vitamin K activity of 4-amino-2-methyl-1-naphthol and 4-amino-3-methyl-1-naphthol, 133, 285
- , Peacock, Gail, and Brown, Raymond A. Chemical determination of thiamine by a modification of the Melnick-Field method, 135, 131
- See *Bird, Vandenbelt, and Emmett*, 142, 317
- Engel, Lewis L., Thorn, George W., and Lewis, Roger A. The urinary excretion of steroid compounds. I. Normal male subjects, 137, 205
- Engel, R. W. Modified methods for the chemical and biological determination of choline, 144, 701
- Entenman, C., Lorenz, F. W., and Chaikoff, I. L. The endocrine control of lipid metabolism in the bird. I. The effects of pregnant mare serum upon the blood and liver lipids of the domestic fowl, 126, 133
- See *Lorenz, Chaikoff, and Entenman*, 126, 763
- See *Montgomery, Entenman, and Chaikoff*, 128, 387
- Entenman, C.—*continued*:
- , Chaikoff, I. L., and Montgomery, M. L. The blood lipids of dogs subjected to ligation of the external pancreatic ducts, 130, 121
- , Lorenz, F. W., and Chaikoff, I. L. The lipid content of blood, liver, and yolk sac of the newly hatched chick and the changes that occur in these tissues during the first month of life, 133, 231
- , Changus, G. W., Gibbs, G. E., and Chaikoff, I. L. The response of lipid metabolism to alterations in nutritional state. I. The effects of fasting and chronic undernutrition upon the postabsorptive level of the blood lipids, 134, 59
- , Lorenz, F. W., and Chaikoff, I. L. The endocrine control of lipid metabolism in the bird. III. The effects of crystalline sex hormones on the blood lipids of the bird, 134, 495
- , Montgomery, M. Laurence, and Chaikoff, I. L. The effect of choline on the blood and liver lipids of the dog subjected to ligation of the pancreatic ducts, 135, 329
- See *Fries, Entenman, Changus, and Chaikoff*, 137, 303
- See *Montgomery, Entenman, Chaikoff, and Nelson*, 137, 693
- , Chaikoff, I. L., and Montgomery, M. Laurence. The rôle of the external secretion of the pancreas in lipid metabolism. The influence of daily ingestion of pancreatic juice upon the level of blood lipids in completely depancreatized and duct-ligated dogs maintained with insulin, 137, 699
- and —. Is choline the factor in the pancreas that prevents fatty livers in depancreatized dogs maintained with insulin? 138, 477
- and —. The response of lipid metabolism to alterations in nutritional state. II. The effects of overnutrition on the postabsorptive levels of the blood lipids of the dog, 142, 129
- See *Fishler, Entenman, Montgomery, and Chaikoff*, 150, 47

- Eppling, F. J.** See *Burris, Eppling, Wahlén, and Wilson*, 148, 349
- Eppstein, Samuel H.** See *Rose and Eppstein*, 127, 677
- Erickson, Betty Nims.** See *Beach, Erickson, Bernstein, Williams, and Macy*, 128, 339
- , **Avrin, Ira, Teague, D. Maxwell, and Williams, Harold H.** Micromethods for the determination of sphingomyelin and choline. Applications for the estimation of the phospholipid partition (sphingomyelin, lecithin, and cephalin) in blood and tissues, 135, 671
- Erickson, John O.** See *Neurath, Cooper, and Erickson*, 138, 411
- , 142, 249, 265
- See *Sharp, Cooper, Erickson, and Neurath*, 144, 139
- See *Bernheim, Neurath, and Erickson*, 144, 259
- Escue, R. B.** See *Zechmeister and Escue*, 144, 321
- Eudin, John.** See *Luck, Eudin, and Nimmo*, 131, 201
- Evans, Cyril D.** See *Manley and Evans*, 143, 701
- Evans, E. A., Jr., and Slotin, Louis.** The utilization of carbon dioxide in the synthesis of α -ketoglutaric acid, 136, 301
- and —. The rôle of carbon dioxide in the synthesis of urea in rat liver slices, 136, 805
- and —. Carbon dioxide utilization by pigeon liver, 141, 439
- , —, and **Vennesland, Birgit.** Carbon dioxide assimilation in cell-free liver extracts, 143, 565
- , **Vennesland, Birgit, and Slotin, Louis.** The mechanism of carbon dioxide fixation in cell-free extracts of pigeon liver, 147, 771
- See *Silverman and Evans*, 150, 265
- Evans, Herbert M.** See *Fraenkel-Conrat, Simpson, and Evans*, 130, 243
- See *Li, Simpson, and Evans*, 131, 259
- See *Emerson, Emerson, and Evans*, 131, 409
- Evans, Herbert M.—continued:**
- See *Mohammad, Emerson, Emerson, and Evans*, 133, 17
- See *Fraenkel-Conrat, Fraenkel-Conrat, Simpson, and Evans*, 135, 199
- See *Li, Lyons, and Evans*, 136, 709
- , 139, 43
- See *Tishler and Evans*, 139, 241
- See *Li, Lyons, and Evans*, 140, 43
- See *Fraenkel-Conrat, Simpson, and Evans*, 142, 107
- See *Li, Simpson, and Evans*, 146, 627
- See *Marz, Simpson, and Evans*, 147, 77
- See *Fraenkel-Conrat, Simpson, and Evans*, 147, 99
- See *Li, Evans, and Simpson*, 149, 413
- Evans, John S., and Hauschildt, James D.** The influence of enzymes upon the activity of gonadotropin of pregnant mare serum, 145, 335
- Evelyn, Kenneth A.** See *Maughan, Evelyn, and Browne*, 126, 567
- , **Malloy, Helga Tait, and Rosen, Charles.** The determination of ascorbic acid in urine with the photoelectric colorimeter, 126, 645
- and —. Microdetermination of oxyhemoglobin, methemoglobin, and sulfhemoglobin in a single sample of blood, 126, 655
- Evenden, James.** See *Chambers, Chandler, and Barker*, 131, 95
- Ewing, D. T., Vandenbelt, J. M., and Kamm, Oliver.** The ultraviolet absorption of vitamins K_1 , K_2 , and some related compounds, 131, 345
- , **Tomkins, F. S., and Kamm, Oliver.** The ultraviolet absorption of vitamin K_1 and the effect of light on the vitamin, 147, 233
- Ewing, Mary E.** See *Larson, Chambers, Blatherwick, Ewing, and Sawyer*, 129, 701
- See *Blatherwick, Bradshaw, Ewing, Larson, and Sawyer*, 134, 549
- See *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 136, 1

Ewing, Mary E.—continued:

- See *Blatherwick, Bradshaw, Ewing, and Sawyer*, 136, 615
 — See *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 138, 353

F

- Falk, K. George. See *Truhlar, Drecker, McGuire, and Falk*, 127, 345
 Falkenheim, Marlene. See *Hodge, Koss, Ginn, Falkenheim, Garrett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
 Fankuchen, I. Ferritin. V. X-ray diffraction data on ferritin and apoferritin, 150, 57
 Fashena, Gladys J., and Stiff, Henry A. On the nature of the saccharoid fraction of human blood. II. Identification of glucuronic acid, 137, 21
 Fassina, R. J. See *Sinclair and Fassina*, 141, 509
 Fay, Marion, Andersch, Marie A., and Behrmann, Vivian G. The biochemistry of strontium, 144, 383
 Fazekas, Joseph F., and Himwich, Harold E. The significance of a pathway of carbohydrate breakdown not involving glycolysis, 139, 971
 — See *Bueding, Fazekas, Herrlich, and Himwich*, 148, 97
 Featherstone, Robert M., and Berg, Clarence P. The comparative availabilities of *d*(+)- and *l*(-)-histidine for the production of liver glycogen, 146, 131
 Feeney, R. E. See *Strong, Feeney, Moore, and Parsons*, 137, 363
 — and Strong, F. M. The concentration of the substance in blood which is stimulatory for *Lactobacillus casei* ϵ , 142; 961
 Feinstein, Robert N., and Stare, F. J. The effect of various media and of pyrophosphate on the respiration of liver tissue, 135, 393
 Fenn, W. O. The deposition of potassium and phosphate with glycogen in rat livers, 128, 297

Fenn, W. O.—continued:

- and Haeghe, Lorraine F. The deposition of glycogen with water in the livers of cats, 136, 87
 Fernholz, Erhard. See *Ansbacher and Fernholz*, 131, 399
 Ferrebee, Joseph W. The effect of adrenalectomy on the phosphorylation of vitamins B₁ and B₂, 136, 719
 Ferry, John D. A fibrous protein from the slime of the hagfish, 138, 263
 Ferry, Ronald M. See *Perlmann and Ferry*, 142, 513
 Fetcher, E. S., Jr. See *Eichelberger, Fetcher, Geiling, and Vos*, 133, 145
 134, 171
 Fevold, H. L. Chemical differences of the follicle-stimulating and luteinizing hormones of the pituitary, 128, 83
 Field, Henry, Jr. See *Melnick and Field*, 127, 505, 515, 531
 130, 97
 134, 1
 135, 53
 — See *Melnick, Robinson, and Field*, 136, 131, 145, 157
 138, 49
 — See *Fox, McNeil, and Field*, 147, 645
 — See *Fox and Field*, 147, 651
 Field, J. Thomas, and Poe, Charles F. A biochemical study of the fermentation of rare sugars by members of the colon and aerogenes groups of bacteria. III. *d*-Fucose, 132, 473
 Field, John B. See *Baumann, Field, Overman, and Link*, 146, 7
 —, Elvehjem, C. A., and Juday, Chancey. A study of the blood constituents of carp and trout, 148, 261
 Fierke, Scheuring S. See *Rose and Fierke*, 143, 115
 Fieser, Louis F. Convenient procedures for the preparation of antihemorrhagic compounds, 133, 391
 — See *Wolfe, Hershberg, and Fieser*, 136, 653
 —, Tishler, Max, and Sampson, W. L. Vitamin K activity and structure, 137, 659

Fieser, Louis F.—continued:

- See *Hershberg, Wolfe, and Fieser*,
140, 215
- Fineman, A. See *Langstroth, Talbot, and Fineman*,
130, 585
- Finkelstein, Norma. See *Smith, Finkelstein, and Smith*,
135, 231
- Fischer, Hermann O. L. See *Baer and Fischer*,
128, 463, 475, 491
135, 321
140, 397
143, 563
145, 61
150, 213, 223
- Fish, William R. See *Dorfman and Fish*,
135, 349
- and Dorfman, Ralph I. Metabolism of the steroid hormones. I. The conversion of α -estradiol to estrone by the guinea pig,
140, 83
- and —. II. The conversion of α -estradiol to estrone and β -estradiol by the ovariectomized-hysterectomized rabbit,
143, 15
- , —, and Young, William C. Metabolism of the steroid hormones. III. The isolation of pregnandiol-3(α),-20(α) from the urine of pregnant chimpanzees,
143, 715
- Fisher, A. M. See *Scott and Fisher*,
144, 371
- Fisher, C. Virginia. See *Martin and Fisher*,
144, 289
- Fisher, R. B., and Wilhelmi, A. E. Observations on the relation of urea and glycine to creatine synthesis,
132, 135
- Fishler, M. C., Taurog, Alvin, Perlman, I., and Chaikoff, I. L. The synthesis and breakdown of liver phospholipid *in vitro* with radioactive phosphorus as indicator,
141, 809
- , Entenman, C., Montgomery, M. Laurence, and Chaikoff, I. L. The formation of phospholipid by the hepatectomized dog as measured with radioactive phosphorus. I. The site of formation of plasma phospholipids,
150, 47

- Fishman, M. M. See *Dean and Fishman*,
140, 807
- Fishman, William H. Studies on β -glucuronidase. I. A method of preparation and purification,
127, 367
- II. Factors controlling the initial velocity of hydrolysis of some conjugated glucuronides,
131, 225
- III. The increase in β -glucuronidase activity of mammalian tissues induced by feeding glucuronidogenic substances,
136, 229
- and Artom, Camillo. Serine injury,
145, 345
- See *Artom and Fishman*,
148, 405, 415, 423
- and Cohn, Mildred. A comparative study of acetylation *in vivo* of phenylaminobutyric acid with *p*-aminobenzoic acid and sulfanilamide,
148, 619
- Fiske, Cyrus H. See *Hitchings and Fiske*,
140, 491
141, 827
- Fleischer, Gerhard A. On the alcohol solubility of prolactin,
147, 525
- See *Schwenk, Fleischer, and Tolkendorf*,
147, 535
- Flexner, Louis B. See *Stiehler and Flexner*,
126, 603
- and Stiehler, Robert D. Biochemical changes associated with the onset of secretion in the fetal chorioid plexus. An organization of oxidation-reduction processes,
126, 619
- Biochemical changes associated with onset of secretory activity in the metanephros of the fetal pig. The cytochrome oxidase-cytochrome system and oxidation-reduction potentials,
131, 703
- See *Pohl and Flexner*,
139, 163
- , Gellhorn, Alfred, and Merrell, Margaret. Studies on rates of exchange of substances between the blood and extravascular fluid. I. The exchange of water in the guinea pig,
144, 35
- Flink, Edmund Berney, and Watson, Cecil James. A method for the

- quantitative determination of hemoglobin and related heme pigments in feces, urine, and blood plasma, 146, 171
- Flock, Eunice V.** See *Kendall, Flock, Bollman, and Mann*, 126, 697
- , **Hester, Harold R., and Bollman, Jesse L.** Phospholipid changes during the production of fatty livers in geese, 128, 153
- , **Ingle, Dwight J., and Bollman, Jesse L.** Formation of lactic acid, an initial process in working muscle, 129, 99
- See *Bollman and Flock*, 130, 565
- and **Bollman, Jesse L.** Resynthesis of muscle glycogen after exercise, 136, 469
- and —. The effect of diethylstilbestrol on the plasma phospholipids of the cock (*Gallus domesticus*), 144, 571
- See *Bollman and Flock*, 147, 155
- Flox, Jack, Pitesky, Isadore, and Alving, Alf S.** A direct photoelectric colorimetric method for the determination of diodrast and iodides in blood and urine, 142, 147
- Folch, Jordi, and Van Slyke, Donald D.** Nitrogenous contaminants in petroleum ether extracts of plasma lipids, 129, 539
- See *Van Slyke and Folch*, 136, 509
- and **Schneider, Howard A.** An amino acid constituent of ox brain cephalin, 137, 51
- The isolation of phosphatidyl serine from brain cephalin, and identification of the serine component, 139, 973
- and **Woolley, D. W.** Inositol, a constituent of a brain phosphatide, 142, 963
- The nature of the glycerophosphoric acid present in phosphatides, 146, 31
- Brain cephalin, a mixture of phosphatides. Separation from it of phosphatidyl serine, phosphatidyl ethanolamine, and a fraction containing an inositol phosphatide, 146, 35
- Folkers, Karl.** See *du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris*, 146, 475
- Follansbee, R.** See *Beecher, Follansbee, Murphy, and Craig*, 146, 197
- Forbes, J. C.** See *Bowers, Outhouse, and Forbes*, 132, 675
- Ford, Zenas W., Jr.** See *Sure and Ford*, 146, 241
- Forman, Sylvan E.** See *Carr and Forman*, 128, 425
- Forth, Rachel.** See *Huff and Perlzweig*, 142, 401
- Foster, E. G.** See *Baumann, Foster, and Moore*, 142, 597
- Foster, G. L., Schoenheimer, Rudolf, and Rittenberg, D.** Studies in protein metabolism. V. The utilization of ammonia for amino acid and creatine formation in animals, 127, 319
- See *Rittenberg and Foster*, 133, 737
- See *Graff, Rittenberg, and Foster*, 133, 745
- Foster, Jackson W.** Quantitative estimation of penicillin, 144, 285
- and **Woodruff, H. Boyd.** Improvements in the cup assay for penicillin, 148, 723
- See *Stokes, Larsen, Woodward, and Foster*, 150, 17
- Fourt, Lyman.** See *Campbell and Fourt*, 129, 385
- See *Harkins, Fourt, and Fourt*, 132, 111
- Fourt, Priscilla Chinn.** See *Harkins, Fourt, and Fourt*, 132, 111
- Fowler, Richard C.** See *Hodge, Koss, Ginn, Falkenkeim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Fox, Sidney W., McNeil, Edna W., and Field, Henry, Jr.** A simplified photometric estimation of trigonelline, 147, 645
- and **Field, Henry, Jr.** The synthesis of nicotinic acid, 147, 651
- Fraenkel-Conrat, Heinz, Simpson, Miriam E., and Evans, Herbert M.** The effect of cysteine on gonadotropic hormones, 130, 243

Fraenkel-Conrat, Heinz—continued:

- See *Fraenkel-Conrat, Fraenkel-Conrat, Simpson, and Evans*, 135, 199
- , *Simpson, Miriam E., and Evans, Herbert M.* The effect of thiol compounds on the activity of lactogenic hormone, 142, 107
- The effect of thiols on the reducing groups of lactogenic hormone, 142, 119
- , *Simpson, Miriam E., and Evans, Herbert M.* Influence of adrenalectomy and of adrenocortical steroids on liver arginase, 147, 99
- Effect of light in the Van Slyke method for the determination of amino groups, 148, 453
- Fraenkel-Conrat, Jane, Fraenkel-Conrat, Heinz, Simpson, Miriam E., and Evans, Herbert M.* Purification of thyrotropic hormone of the anterior pituitary, 135, 199
- Frame, Elizabeth G., Russell, Jane A., and Wilhelmi, Alfred E.* The colorimetric estimation of amino nitrogen in blood, 149, 255
- Frampton, Vernon L.* Viscosimetric studies on the tobacco mosaic virus protein. I, 129, 233
- See *Sumner, Dounce, and Frampton*, 136, 343
- Franke, Kurt W.* See *Painter and Franke*, 134, 557
- Franklin, A. L., and Chaikoff, I. L.* The effect of sulfanilamide on the conversion *in vitro* of inorganic iodine to thyroxine and diiodotyrosine by thyroid slices, 148, 719
- Frankston, Jane E.* See *Albanese and Frankston*, 144, 563
- See *Albanese, Holt, Kajdi, and Frankston*, 148, 299
- Fraps, G. S.* See *Wegner, Kemmerer, and Fraps*, 144, 731
- 146, 547
- Free, Alfred H., Davies, Dean F., and Myers, Victor C.* Effect of sulfanilamide accompanied by acid or alkali upon the acid-base equilibrium of the dog. Possible influence of carbonic anhydrase, 147, 167

Free, Alfred H.—continued:

- and *Leonards, Jack R.* Serum phosphorus changes during the absorption and metabolism of glucose, galactose, and xylose, 149, 203
- Freeman, John A.* See *Artom and Freeman*, 135, 59
- Freeman, Smith.* See *Chen, Freeman, and Ivy*, 132, 445
- Freiberg, Irene Koechig.* See *Greaves, Freiberg, and Johns*, 133, 243
- Frey, Charles N.* See *Atkin, Schultz, and Frey*, 129, 471
- See *Schultz, Atkin, and Frey*, 135, 267
- 136, 713
- Fricke, H. H.* See *Longenecker, Fricke, and King*, 135, 497
- Friedemann, Theodore E.* The carbohydrate metabolism of *Staphylococcus aureus*, 130, 61
- The carbohydrate metabolism of streptococci, 130, 757
- See *Barron and Friedemann*, 137, 593
- and *Barborka, Clifford J.* A procedure for the decolorization of acid digestion mixtures for the determination of nicotinic acid, 138, 785
- and — The significance of the ratio of lactic to pyruvic acid in the blood after exercise, 141, 993
- Ketosis in Primates. II. The ratio of β -hydroxybutyric acid to acetoacetic acid in the blood and urine, 142, 635
- and *Haugen, Gladys E.* Pyruvic acid. I. Collection of blood for the determination of pyruvic and lactic acids, 144, 67
- and — II. The determination of keto acids in blood and urine, 147, 415
- Frieden, Edward H.* See *Dunn, Frieden, Stoddard, and Brown*, 144, 487
- Friedenwald, Jonas S., and Herrmann, Heinz.* The inactivation of amine oxidase by enzymatic oxidative products of catechol and adrenalin, 146, 411
- Friedman, Max M.* Simplified bromide determination in blood and urine, 144, 519

- Fries, B. A., Changus, G. W., and Chaikoff, I. L. Radioactive phosphorus as an indicator of phospholipid metabolism. IX. The influence of age on the phospholipid metabolism of various parts of the central nervous system of the rat. The comparative phospholipid activity of various parts of the central nervous system of the rat, 132, 23
- , Entenman, C., Changus, G. W., and Chaikoff, I. L. The deposition of lipids in various parts of the central nervous system of the developing rat, 137, 303
- and Chaikoff, I. L. Factors influencing recovery of injected labeled phosphorus in various organs of the rat, 141, 469
- and —. The phosphorus metabolism of the brain as measured with radioactive phosphorus, 141, 479
- , Schachner, H., and Chaikoff, I. L. The *in vitro* formation of phospholipid by brain and nerve with radioactive phosphorus as indicator, 144, 59
- See Schachner, Fries, and Chaikoff, 146, 95
- Fromageot, Claude. See Laskowski and Fromageot, 140, 663
- Frost, Douglas V., and Elvehjem, C. A. Factor W and its relation to the vitamin B complex, 128, 23
- See Black, Frost, and Elvehjem, 132, 65
- See McKibbin, Schaefer, Frost, and Elvehjem, 142, 77
- The water-soluble riboflavin-boron complex, 145, 693
- Fruton, Joseph S., and Bergmann, Max. The specificity of pepsin, 127, 627
- See Bergmann, Fruton, and Pollok, 127, 643
- and Bergmann, Max. On the proteolytic enzymes of animal tissues. I. Beef spleen, 130, 19
- and Lavin, G. I. Ultraviolet absorption spectrum of papain, 130, 375
- , Irving, George W., Jr., and Bergmann, Max. The specificity of proteolytic enzymes from tumors, 132, 465
- Fruton, Joseph S.—continued:
- and Bergmann, Max. The activation of papain, 133, 153
- , Irving, George W., Jr., and Bergmann, Max. Preparation of *d*(-)-glutamic acid from *dl*-glutamic acid by enzymatic resolution, 133, 703
- and Bergmann, Max. The specificity of salmon pepsin, 136, 559
- See Irving, Fruton, and Bergmann, 138, 231
- , Irving, George W., Jr., and Bergmann, Max. On the proteolytic enzymes of animal tissues. II. The composite nature of beef spleen cathepsin, 138, 249
- See Irving, Fruton, and Bergmann, 139, 569
- , Irving, George W., Jr., and Bergmann, Max. On the proteolytic enzymes of animal tissues. III. The proteolytic enzymes of beef spleen, beef kidney, and swine kidney. Classification of the cathepsins, 141, 763
- See Irving, Fruton, and Bergmann, 144, 161
- See Bergmann and Fruton, 145, 247
- and Bergmann, Max. The multiple specificity of chymotrypsin, 145, 253
- Synthesis of peptides of *l*-serine, 146, 463
- Fuhr, Irvin, and Steenbock, H. The effect of dietary calcium, phosphorus, and vitamin D on the utilization of iron. I. The effect of phytic acid on the availability of iron, 147, 59
- and —. II. The effect of vitamin D on body iron and hemoglobin production, 147, 65
- and —. III. The relation of rickets to anemia, 147, 71
- Futcher, Palmer H. See Van Slyke, Phillips, Hamilton, Archibald, Futcher, and Hiller, 150, 481

G

- Gaby, W. L. See Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy, 147, 47
- See Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones, 148, 365

- Gaebler, Oliver Henry, and Bartlett, Paul. Effects of anterior pituitary preparations and iodine on nitrogen excretion, creatinuria, and basal metabolism, 129, 559
- . The relationship of extinction to wave-length in turbid sera and other suspensions, 149, 251
- Gailey, Franklin B., and Johnson, Marvin J. The dipeptidases of intestinal mucosa, 141, 921
- Gallagher, T. F. See *Potts and Gallagher*, 143, 561
- and Long, William P. Partial oxidation of cholic acid, 147, 131
- Garfinkel, Leo. See *Golden and Garfinkel*, 144, 447
- Gavett, Elizabeth. See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Gavin, Gertrude. See *McHenry and Gavin*, 128, 45
- and McHenry, E. W. The B vitamins and fat metabolism. III. The effects of vitamin B₆ upon liver and body fat, 132, 41
- . See *McHenry and Gavin*, 134, 683
- . See *Longenecker, Gavin, and McHenry*, 134, 693
- . See *McHenry and Gavin*, 138, 471
- and McHenry, E. W. Inositol: a lipotropic factor, 139, 485
- . See *Longenecker, Gavin, and McHenry*, 139, 611
- and McHenry, E. W. The effects of biotin upon fat synthesis and metabolism, 141, 619
- , Patterson, Jean M., and McHenry, E. W. Comparison of the lipotropic effects of choline, inositol, and liposac in rats, 148, 275
- Geiger, Walton B., Jr., and Anderson, R. J. The chemistry of *Phytomonas tumefaciens*. I. The lipids of *Phytomonas tumefaciens*. The composition of the phosphatide, 129, 519
- and —. The chemistry of the lipids of tubercle bacilli. LVIII. Concerning the firmly bound lipids of the so called leprosy bacillus, 131, 539
- Geiling, E. M. K. See *Eichelberger, Fetcher, Geiling, and Vos*, 133, 145
- . See *Eichelberger, Geiling, and Vos*, 133, 661
- . See *Eichelberger, Fetcher, Geiling, and Vos*, 134, 171
- Gellhorn, Alfred. See *Flexner, Gellhorn, and Merrell*, 144, 35
- Gentzkow, Cleon J. An accurate method for the determination of blood urea nitrogen by direct nesslerization, 143, 531
- Gersdorff, Charles E. F. See *Jones and Gersdorff*, 129, 207
- Gettler, Alexander O., and Umberger, Charles J. A quantitative method for ethyl alcohol normally present in blood, 143, 633
- Gibbs, E. L., Lennox, W. G., Nims, L. F., and Gibbs, F. A. Arterial and cerebral venous blood. Arterial-venous differences in man, 144, 325
- . See *Nims, Gibbs, and Lennox*, 145, 189
- Gibbs, F. A. See *Gibbs, Lennox, Nims, and Gibbs*, 144, 325
- Gibbs, G. E. See *Entenman, Changus, Gibbs, and Chaikoff*, 134, 59
- Gibson, John G., 2nd, and Blotner, Harry. The determination of ethyl alcohol in blood and urine with the photoelectric colorimeter, 126, 551
- Gillette, Leslie A. See *Anderson, Gillette, and Seeley*, 140, 569
- Gilligan, D. Rourke. See *Lowry, Gilligan, and Katersky*, 139, 795
- Ginn, James T. See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Ginrich, Wendell. See *Schlenk and Ginrich*, 143, 295
- Ginsburg, Emanuel, and Benotti, Norbert. The determination of thiocyanate in serum after the administration of its salts, 131, 503
- Glaubach, Susi. See *Glick, Glaubach, and Moore*, 144, 525

- Gleason, Donald F. See Clark, Levitan, Gleason, and Greenberg, 145, 85
- Glick, David. Further studies on the specificity of choline esterase, 130, 527
- See Antopol and Glick, 132, 669
- Properties of tropine esterase, 134, 617
- Some additional observations on the specificity of cholinesterase, 137, 357
- Glaubach, Susi, and Moore, Dan H. Azolesterase activities of electrophoretically separated proteins of serum, 144, 525
- Glick, Francis J. See Carter, Glick, Norris, and Phillips, 142, 449
- Godfrid, Marcos. See Katzman, Godfrid, Cain, and Doisy, 148, 501
- Goebel, Walther F., Beeson, Paul B., and Hoagland, Charles L. Chemo-immunological studies on the soluble specific substance of pneumococcus. IV. The capsular polysaccharide of Type XIV pneumococcus and its relationship to the blood Group A specific substance, 129, 455
- See Reeves and Goebel, 139, 511
- See Adams, Reeves, and Goebel, 140, 653
- , Shedlovsky, Theodore, Lavin, George I., and Adams, Mark H. The heterophile antigen of pneumococcus, 148, 1
- Goepfert, George J. Studies in the mechanism of dehydrogenation by *Fusarium lini* Bolley. XIX. Dehydrogenation of higher primary and secondary alcohols, 140, 525
- Goerner, Alfred, and Goerner, M. Margaret. Vitamin A and liver cell tumors, 128, 559
- Goerner, M. Margaret. See Goerner and Goerner, 128, 559
- Goettsch, E., Lyttle, John D., Grim, W. M., and Dunbar, P. Amino acid studies. I. Plasma amino acid retention in the hypoproteinemic dog as evidence of impaired liver function, 144, 121
- Goettsch, Marianne, Lonstein, Ida, and Hutchinson, John J. Muscle phosphorus in nutritional muscular dystrophy in rabbits, 128, 9
- Golden, Walter R. C., and Garfinkel, Leo. Medical evaluation of nutritional status. XII. The stability of ascorbic acid in whole blood, plasma, and plasma filtrates, 144, 447
- Goldfarb, Walter. See Bueding and Goldfarb, 141, 539
- Goldinger, J. M. See Barron, Lyman, Lipton, and Goldinger, 141, 957
- See Barron, Goldinger, Lipton, and Lyman, 141, 975
- See Stare, Lipton, and Goldinger, 141, 981
- Golumbic, Calvin, and Mattill, H. A. The oxidation of vitamin E, 134, 535
- and —. α -Tocopherylquinone and dystrophy in rabbits, 135, 339
- Gomori, G. Hexosediphosphatase, 148, 139
- Goodhart, Robert, and Sinclair, H. M. Deficiency of vitamin B₁ in man as determined by the blood cocarboxylase, 132, 11
- A reevaluation of the method described by Goodhart and Sinclair for the determination of blood cocarboxylase values, 135, 77
- See Bueding and Goodhart, 141, 931
- Gordon, Solon A., and Wildman, Sam G. The conversion of tryptophane to a plant growth substance by conditions of mild alkalinity, 147, 389
- Gordon, William G. The metabolism of N-methylated amino acids. I. The availability of α -N-monomethyllysine and α -N-dimethyllysine for growth, 127, 487
- II. The comparative availability of *l*(-)-tryptophane, *l*(+)- and *dl*-amino-N-monomethyltryptophane for growth, 129, 309
- , Cahill, William M., and Jackson, Richard W. The availability for growth of N-methyltryptophane administered as its acetyl derivative, 131, 189

- Gorham, Alice T. See *Smith, Gorham, and Smith*, 144, 737
- Gorin, Manuel H. See *Moyer and Gorin*, 133, 605
- Gornall, Allan G., and Hunter, Andrew. The synthesis of urea in the liver, with special reference to citrulline as an intermediary in the ornithine cycle, 147, 593
- Goss, Harold. See *McElroy and Goss*, 130, 437
- Gottlieb, Rudolph. See *Lozinski and Gottlieb*, 133, 635
- Gould, Bernard S., Tytell, Alfred A., and Jaffe, Herbert. Biochemistry of *Fusaria*. The influence of diphosphopyridine nucleotide on alcoholic fermentation (*in vivo*), 146, 219
- Gould, R. Gordon, Jr. See *Jacobs and Gould*, 126, 67
- and Jacobs, Walter A. The preparation of certain trimethyleindole derivatives, 130, 407
- , Craig, Lyman C., and Jacobs, Walter A. The ergot alkaloids. XIX. The transformation of *dl*-lysergic acid and *d*-lysergic acid to 6,8-dimethylergolines, 145, 487
- Grafa, Barney G., Jr. See *Treadwell, Tidwell, and Grafa*, 149, 209
- Graff, Samuel. Glutamic acid in malignant tumors, 130, 13
- , Rittenberg, D., and Foster, G. L. The glutamic acid of malignant tumors, 133, 745
- Graffin, Allan L. See *Marble, Graffin, and Smith*, 134, 253
- Grail, Godfrey F. See *Stetten and Grail*, 144, 175
- , 148, 509
- Grand, J. A. See *Baernstein and Grand*, 140, 285
- Granick, S. Ferritin. I. Physical and chemical properties of horse spleen ferritin, 146, 451
- and Michaelis, Leonor. Ferritin. II. Apoferritin of horse spleen, 147, 91
- See *Michaelis, Coryell, and Granick*, 148, 463
- Granick, S.—*continued*:
 —. Ferritin. IV. Occurrence and immunological properties of ferritin, 149, 157
- See *Hahn, Granick, Bale, and Michaelis*, 150, 407
- Grattan, J. F., and Jensen, H. The effect of the pituitary adrenocorticotrophic hormone and of various adrenal cortical principles on insulin hypoglycemia and liver glycogen, 135, 511
- Grau, C. R. See *Almquist and Grau*, 149, 575
- Grauer, Robert C. See *Saier, Warg, and Grauer*, 137, 317
- See *Saier, Grauer, and Starkey*, 148, 213
- Gray, E. LeB. See *Bills, Massengale, Hickman, and Gray*, 126, 241
- Comparison of vitamins A and A₂ by distillation, 131, 317
- and Cawley, John D. The influence of structure on the elimination maximum. I. The structure of vitamin A₂, 134, 397
- The structure of cephalin, 136, 167
- Gray, J. S., Ivy, A. C., and Cuthbert, F. P. The conversion of protein to glucose in depancreatized and phlorhizinized dogs, 128, 173
- Gray, Priscilla. See *Handler and Dann*, 145, 145
- Grayman, Isabelle. See *Mirsky, Nelson, and Grayman*, 130, 179
- , Nelson, Norton, and Mirsky, I. Arthur. The utilization of acetone bodies. II. The influence of sex, 131, 121
- See *Nelson, Grayman, and Mirsky*, 132, 711
- , 140, 361
- Greaves, Joseph D., Freiberg, Irene Koechig, and Johns, H. E. Preparation and assay of anterior pituitary fractions rich in ketogenic and respiratory quotient-reducing substances, 133, 243
- Greaves, Vera D. See *Okey and Greaves*, 129, 111
- Greeley, Paul O. See *Deuel, Hallman, Greeley, Butts, and Halliday*, 133, 173

- Green, Arda Alden. See *Drinker, Green, and Hastings*, 131, 641
- , Cori, Gerty T., and Cori, Carl F. Crystalline muscle phosphorylase, 142, 447
- Green, D. E. See *Williamson and Green*, 135, 345
- , Herbert, D., and Subrahmanyam, V. On the isolation and properties of carboxylase, 135, 795
- , —, and —. Carboxylase, 138, 327
- , Knox, W. E., and Stumpf, P. K. A flavoprotein from yeast, 138, 775
- , Westerfeld, W. W., Vennesland, Birgit, and Knox, W. E. Pyruvic and α -ketoglutaric carboxylases of animal tissues, 140, 683
- and Stumpf, P. K. Starch phosphorylase of potato, 142, 355
- , Westerfeld, W. W., Vennesland, Birgit, and Knox, W. E. Carboxylases of animal tissues, 145, 69
- , Nocito, V., and Ratner, S. *l*-Amino acid oxidase of animal tissues, 148, 461
- Green, Leila S. See *Ross and Green*, 137, 105
- Green, Lowell F., McCarthy, James F., and King, C. G. Inhibition of respiration and photosynthesis in *Chlorella pyrenoidosa* by organic compounds that inhibit copper catalysis, 128, 447
- See *McCarthy, Green, and King*, 128, 455
- Green, Mary H. See *Schmidt, Hughes, Green, and Cooper*, 145, 229
- Green, Milton. See *Reiner, Moore, Lang, and Green*, 146, 583
- Greenberg, David M. See *Joseph, Cohn, and Greenberg*, 128, 673
- See *Cohn and Greenberg*, 130, 625
- See *Austoni, Rabinovitch, and Greenberg*, 134, 17
- See *Austoni and Greenberg*, 134, 27
- and Winnick, Theodore. Plant proteases. I. Activation-inhibition reactions, 135, 761
- and —. II. pH-activity curves, 135, 775
- Greenberg, David M.—*continued*:
- and Winnick, Theodore. I. Kinetic properties, 135, 781
- , Campbell, W. Wesley, and Mur yama, Makio. Studies in mineral metabolism with the aid of artificial radioactive isotopes. V. The absorption, excretion, and distribution of labeled sodium in rats maintained on normal and low sodium diets, 136, 35
- See *Winnick and Greenberg*, 137, 429
- and Cuthbertson, Elizabeth M. Dietary chloride deficiency and alkalosis in the rat, 145, 179
- , Copp, D. Harold, and Cuthbertson, Elizabeth M. Studies in mineral metabolism with the aid of artificial radioactive isotopes. VII. The distribution and excretion, particularly by way of the bile, of iron, cobalt, and manganese, 147, 749
- See *Kaplan and Greenberg*, 150, 479
- Greenberg, Goodwin. See *Clark, Levitan, Gleason, and Greenberg*, 145, 85
- Greenberg, Leon A. Acetoin: polarographic determination and disappearance from the blood after administration, 147, 11
- Greenblatt, I. J., and Pecker, A. The effect of ascorbic acid on iminazole rings and allied substances *in vivo*, 134, 341
- Guanidinuria, 137, 791
- Greene, R. D. Preparation of vitamin B₆ from natural sources, 130, 513
- Greengard, Harry, and Woolley, Jean Rea. Studies on colloidal sulfur-polysulfide mixture. Absorption and oxidation after oral administration, 132, 83
- Greenstein, Jesse P. Sulfhydryl groups in proteins. II. Edestin, excelsin, and globin in solutions of guanidine hydrochloride, urea, and their derivatives, 128, 233
- Studies of multivalent amino acids and peptides. XI. The synthesis of diglycyl-*l*-cystine, 128, 241

Greenstein, Jesse P.—*continued*:

- and Klemperer, Friedrich W. Aspartylhistidine, 128, 245
- , —, and Wyman, Jeffries, Jr. Further studies on the physical chemistry of cystine peptides, 129, 681
- Sulfhydryl groups in proteins. III. The effect on egg albumin of various salts of guanidine, 130, 519
- and Edsall, John T. The effect of denaturing agents on myosin. I. Sulfhydryl groups as estimated by porphyrindin titration, 133, 397
- Sulfhydryl groups of serum albumin, serum, and milk, 136, 795
- , Jenrette, Wendell V., Mider, G. Burroughs, and White, Julius. The relative arginase activity of certain tumors and normal control tissues, 137, 795
- , —, and White, Julius. The liver catalase activity of tumor-bearing rats and the effect of extirpation of the tumors, 141, 327
- and —. The reactivity of porphyrindin in the presence of denatured proteins, 142, 175
- See *Davis, Hollaender, and Greenstein*, 146, 663
- The colloid osmotic pressure of mixtures of protein and thymus nucleate, 150, 107
- Greenwald, Isidor, Redish, Jules, and Kibrick, Andre C. The dissociation of calcium and magnesium phosphates, 135, 65
- The dissociation of calcium and magnesium carbonates and bicarbonates, 141, 789
- The solubility of calcium phosphate. I. The effect of pH and of amount of solid phase, 143, 703
- II. The solubility product, 143, 711
- Greenwood, D. A. See *Beadle, Greenwood, and Kraybill*, 149, 339
- , Beadle, B. W., and Kraybill, H. R. Stability of thiamine to heat. II. Effect of meat-curing ingredients in aqueous solutions and in meat, 149, 349

- Greep, R. O., van Dyke, H. B., and Chow, Bacon F. Separation in nearly pure form of luteinizing (interstitial cell-stimulating) and follicle-stimulating (gametogenic) hormones of the pituitary gland, 133, 289
- Gregg, Donald C. See *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 139, 787
- Griffith, Wendell H., and Wade, Nelson J. Choline metabolism. I. The occurrence and prevention of hemorrhagic degeneration in young rats on a low choline diet, 131, 567
- and —. II. The interrelationship of choline, cystine, and methionine in the occurrence and prevention of hemorrhagic degeneration in young rats, 132, 627
- Choline metabolism. III. The effect of cystine, fat, and cholesterol on hemorrhagic degeneration in young rats, 132, 639
- Grim, W. M. See *Goettsch, Lytle, Grim, and Dunbar*, 144, 121
- Grinnell, S. W. See *Scholander, Irving, and Grinnell*, 142, 431
- Grinstein, Moises, and Watson, Cecil James. Studies of protoporphyrin. I. The purification of protoporphyrin IX as obtained from hemoglobin, 147, 667
- and —. II. A note on an improved micromethod for converting protoporphyrin to mesoporphyrin, 147, 671
- and —. III. Photoelectric and fluorophotometric methods for the quantitative determination of the protoporphyrin in blood, 147, 675
- Grollman, Arthur, Williams, J. R., Jr., and Harrison, Tinsley R. The preparation of renal extracts capable of reducing the blood pressure of animals with experimental renal hypertension, 134, 115
- Groothuis, Marjorie. See *Treadwell, Groothuis, and Eckstein*, 142, 653
- Gross, Paul. See *Axelrod, Gross, Bosse, and Swingle*, 148, 721

Guerrant, Ralph E., and Hogan, Albert G.

Effect of amino acids on anemia caused by deaminized casein, 128, 363

— See *Hogan, Powell, and Guerrant*, 137, 41

Guest, George Martin. See *Rapoport and Guest*, 126, 749

— 129, 781

— See *Lera and Guest*, 130, 777

— See *Rapoport and Guest*, 131, 675
138, 269

— See *Rapoport, Lera, and Guest*, 139, 621, 633

— See *Rapoport and Guest*, 143, 671

— See *Nelson, Rapoport, Guest, and Mirsky*, 144, 291

— See *Rapoport, Lera, and Guest*, 149, 57, 65

Guest, M. Mason, and Rawson, Ruth A.
Carbohydrate storage and mobilization with changes in the blood pH, 139, 535

— See *McBride, Guest, and Scott*, 139, 943

Guirard, Beverly M. See *Snell, Guirard, and Williams*, 143, 519

Gulick, Addison. See *Mayer and Gulick*, 146, 433

Gunsalus, I. C., and Hand, David B.
The use of bacteria in the chemical determination of total vitamin C, 141, 853

— and *Niven, Charles F., Jr.* The effect of pH on the lactic acid fermentation, 145, 131

— and *Niven, Charles F., Jr.* The effect of pH on the lactic acid fermentation, 145, 131

— and *Niven, Charles F., Jr.* The effect of pH on the lactic acid fermentation, 145, 131

Gurin, Samuel, Bachman, Carl, and Wilson, D. Wright. The gonadotropic hormone of urine of pregnancy. I. A simple method of extraction and purification, 128, 525

— and *Hood, Dorothy B.* The identification and estimation of hexoses in polysaccharides and glycoproteins by the carbazole method, 131, 211

—, *Bachman, Carl, and Wilson, D. Wright.* The gonadotropic hormone of urine of pregnancy. II. Chemical studies of preparations having high biological activity, 133, 467

—, —, and —. III. Evidence of purity

—, —, and —. III. Evidence of purity

—, —, and —. III. Evidence of purity

—, —, and —. III. Evidence of purity

—, —, and —. III. Evidence of purity

Gurin, Samuel—continued:

obtained by studies of electrophoresis and sedimentation, 133, 477

— and *Hood, Dorothy B.* The identification and estimation of pentose in nucleic acids and nucleoproteins, 139, 775

— See *Lundgren, Gurin, Bachman, and Wilson*, 142, 367

Gutman, Alexander B. See *Gutman and Gutman*, 136, 201

Gutman, Ethel Benedict, and Gutman, Alexander B. Estimation of "acid" phosphatase activity of blood serum, 136, 201

György, Paul. The curative factor (vitamin H) for egg white injury, with particular reference to its presence in different foodstuffs and in yeast, 131, 733

—, *Kuhn, Richard, and Lederer, Edgar.* Attempts to isolate the factor (vitamin H) curative of egg white injury, 131, 745

— See *Birch and György*, 131, 761

—, *Poling, C. E., and Subbarow, Yella-pragada.* Observations on the factor curative of nutritional achromotrichia, 132, 789

— See *du Vigneaud, Hofmann, Melville, and György*, 140, 643

—, *Rose, Catharine S., and Tomarelli, Rudolph.* Investigations on the stability of avidin, 144, 169

— and *Tomarelli, Rudolph.* Antioxidant activity in sources of the B vitamins, 147, 515

H

Haagen-Smit, A. J. See *Tatum and Haagen-Smit*, 140, 575

— See *Raper and Haagen-Smit*, 143, 311

— See *Lepkovsky, Roboz, and Haagen-Smit*, 149, 195

Haas, Erwin, Horecker, B. L., and Hogness, T. R. The enzymatic reduction of cytochrome C; a new enzyme, 130, 425

—, —, and —. The enzymatic reduction

—, —, and —. The enzymatic reduction

Haas, Erwin—continued:

- of cytochrome c. Cytochrome c reductase, 136, 747
- See *Horecker, Ma, and Haas*, 136, 775
- , *Harrer, Carter J., and Hogness, T. R.* Microdetermination of triphosphopyridine nucleotide, 142, 835
- , —, and —. Cytochrome reductase. II. Improved method of isolation; inhibition and inactivation; reaction with oxygen, 143, 341
- Cytochrome oxidase, 148, 481
- Haddock, James N., and Thomas, Lloyd E.** The synthesis of plasteins by the action of trypsin and papain on digests of insulin, 144, 691
- Haeger, Lorraine F.** See *Fenn and Haeger*, 136, 87
- Hague, Eleanor.** See *Melville, Hofmann, Hague, and du Vigneaud*, 142, 615
- Hahn, P. F.** See *Miller and Hahn*, 134, 585
- , *Granick, S., Bale, William F., and Michaelis, Leonor.* Ferritin. VI. Conversion of inorganic and hemoglobin iron into ferritin iron in the animal body. Storage function of ferritin iron as shown by radioactive and magnetic measurements, 150, 407
- Haines, William J.** See *Rose, Johnson, and Haines*, 145, 679
- See *Rose, Haines, and Johnson*, 146, 683
- See *Rose, Haines, Johnson, and Warner*, 148, 457
- Hakala, N. V.** See *Petermann and Hakala*, 145, 701
- Hald, Pauline M.** The importance of removing phosphorus in the determination of serum sodium, 130, 133
- See *Solomon, Hald, and Peters*, 132, 723
- Hale, E. B., Davis, G. K., and Baldwin, H. R.** The chemical determination of nicotinic acid in plant materials, 146, 553
- , —, and —. The distribution of nicotinic acid in feeds, 146, 565
- Hall, F. G.** A spectroscopic method for

Hall, F. G.—continued:

- the determination of oxygen saturation in whole blood, 130, 573
- See *Dill, Wilson, Hall, and Robinson*, 136, 449
- Hall, James L.** Moving boundary electrophoretic study of insulin, 139, 175
- Moving boundary electrophoretic study of insulin. A correction, 140, 671
- Hall, James M.** See *Roe and Hall*, 128, 329
- Hall, S. R.** See *Butz and Hall*, 126, 265
- Halliday, D.** See *Smythe and Halliday*, 144, 237
- Halliday, Nellie.** The effect of formalin fixation on liver lipids, 129, 65
- , *Deuel, Harry J., Jr., Tragerman, L. J., and Ward, W. E.* On the isolation of a glucose-containing cerebroside from spleen in a case of Gaucher's disease, 132, 171
- See *Deuel, Hallman, Greeley, Butts, and Halliday*, 133, 173
- See *Deuel, Halliday, Hallman, Johnston, and Miller*, 139, 479
- and *Deuel, Harry J., Jr.* The presence of free and combined thiamine in milk, 140, 555
- Hallman, Lois F.** See *Deuel, Hallman, Greeley, Butts, and Halliday*, 133, 173
- See *Blunden, Hallman, Morehouse, and Deuel*, 135, 757
- See *Deuel, Halliday, Hallman, Johnston, and Miller*, 139, 479
- See *Deuel and Hallman*, 140, 545
- Hallstone, Victor E.** See *Deuel and Hallman*, 140, 545
- Halpin, J. G.** See *Wiese, Johnson, Elrehjem, Hart, and Halpin*, 127, 411
- Halverstadt, I. F.** See *Kumler and Halverstadt*, 137, 765
- Hamilton, James B.** See *Dorfman, Cook, and Hamilton*, 130, 285
- See *Dorfman and Hamilton*, 133, 753
- Hamilton, Paul B.** See *Van Slyke, Dillon, MacFadyen, and Hamilton*, 141, 627
- See *Van Slyke, MacFadyen, and Hamilton*, 141, 671

Hamilton, Paul B.—continued:

- A glutamine-like substance in blood plasma, 145, 711
- See Archibald and Hamilton, 150, 155
- and Van Slyke, Donald D. The gasometric determination of free amino acids in blood filtrates by the ninhydrin-carbon dioxide method, 150, 231
- See Van Slyke, MacFadyen, and Hamilton, 150, 251
- See Van Slyke and Hamilton, 150, 471
- See Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller, 150, 481

Hamlin, Kenneth E., Jr., and Hartung, Walter H. The synthesis of α -amino acids from substituted acetoacetic esters, 145, 349

Hammarsten, Einar. See Ågren, Hammarsten, and Rosdahl, 127, 541

Hand, David B. See Gunsalus and Hand, 141, 853

Handler, Philip. See Carter, Handler, and Melville, 129, 359

—, Bernheim, Frederick, and Klein, J. Raymond. The oxidation *in vitro* of N-methylamino acids by kidney and liver, 138, 203

—, Bernheim, Mary L. C., and Klein, J. Raymond. The oxidative demethylation of sarcosine to glycine, 138, 211

— See Carter, Handler, and Stevens, 138, 619

— See Klein and Handler, 139, 103

— See Dann and Handler, 140, 201

— and Dann, W. J. The nicotinic acid and coenzyme content of animal tissues, 140, 739

— See Dann and Handler, 140, 935

— and Klein, J. Raymond. The inactivation of pyridine nucleotides by animal tissues *in vitro*, 143, 49

— and Bernheim, Frederick. The choline oxidase activity of fatty livers, 144, 401

— and Klein, J. Raymond. The inactivation of pyridine nucleotides by animal tissues *in vitro*, 144, 453

Handler, Philip—continued:

— See Klein and Handler, 144, 537

— See Klein, Perlzweig, and Handler, 145, 27

— and Dann, W. J. The biochemical defect in nicotinic acid deficiency, 145, 145

— and —. The inhibition of rat growth by nicotinamide, 146, 357

— and Bernheim, Frederick. The effect of choline deficiency on the fat content of regenerated liver, 148, 649

— The effect of simultaneous mineral and choline deficiencies on liver fat, 149, 291

— and Bernheim, Mary L. C. The specificity of l(-)-methionine in creatine synthesis, 150, 335

— and Kohn, Henry I. The mechanism of cozymase synthesis in the human erythrocyte: a comparison of the rôles of nicotinic acid and nicotinamide, 150, 447

Hanke, Martin E. See Blauch, Koch, and Hanke, 130, 471

— See Kendrick and Hanke, 132, 739

Hanok, Albert. See Sobel, Hanok, and Kramer, 144, 363

Hansard, S. L. See Sutton, Kaesser, and Hansard, 144, 183

Hansen, P. Arne, and Nielsen, Verner. Colorimetric determination of ammonia with thymol-hypobromite reagent, 131, 309

Hanson, H. T. See Barnes, Lundberg, Hanson, and Burr, 149, 313

Hardin, Garrett. See Strain, Manning, and Hardin, 148, 655

Harkins, William D., Fourt, Lyman, and Fourt, Priscilla Chinn. Immunochemistry of catalase. II. Activity in multilayers, 132, 111

Harper, Harold A., and Deuel, Harry J., Jr. The urinary pyruvate in thiamine deficiency, 137, 233

— Carbohydrate metabolism in thiamine deficiency, 142, 239

Harrelson, R. T. See Sure, Theis, and Harrelson, 129, 245

Harrer, Carter J. See Schultze, Harrer, and King, 131, 5

Harrer, Carter J.—continued:

- and King, C. G. Ascorbic acid deficiency and enzyme activity in guinea pig tissues, 138, 111
- See Haas, Harrer, and Hogness, 142, 835
143, 341
- Harris, J. S., and Kohn, Henry I.** The effect of purines on the action of sulfonamides, 141, 989
- Harris, John E.** A modified silver cobaltinitrite method for potassium determination, 136, 619
- The influence of the metabolism of human erythrocytes on their potassium content, 141, 579
- Harris, Philip L.** See Baxter, Harris, Hickman, and Robeson, 141, 991
- See Weissberger and Harris, 144, 287
- See Jensen, Shantz, Embree, Cawley, and Harris, 149, 473
- Harris, Robert L., and Mattill, H. A.** The effect of hot alcohol on purified animal proteins, 132, 477
- Harris, Ruth C.** The adsorption of protein by filter paper in the estimation of albumin in blood serum, 127, 751
- Harris, Stanton A.** See du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris, 146, 475
- Harris, Tzvee N.** See Zittle and Harris, 142, 823
- Harrison, Harold E.** See Darrow, Harrison, and Taffel, 130, 487
- Harrison, Helen C., and Long, C. N. H.** The distribution of ketone bodies in tissues, 133, 209
- Harrison, Norman B.** See Turner, Kress, and Harrison, 148, 581
- Harrison, Tinsley R.** See Grollman, Williams, and Harrison, 134, 115
- Hart, E. B.** See Potter, Elvehjem, and Hart, 126, 155
- See Bird, Oleson, Elvehjem, and Hart, 126, 671
- See Oleson, Bird, Elvehjem, and Hart, 127, 23
- See Wiese, Johnson, Elvehjem, Hart, and Halpin, 127, 411

Hart, E. B.—continued:

- See Kohler, Elvehjem, Hart, 128, 501
- See Hegsted, Oleson, Hart, 130, 423
- See Hove, Elvehjem, and Hart, 134, 425
136, 425
- See Wachtel, Hove, Elvehjem, and Hart, 138, 361
- See Hegsted, Mills, Elvehjem, and Hart, 138, 459
- See Hegsted, Hier, Elvehjem, and Hart, 139, 863
- See Hegsted, Briggs, Elvehjem, and Hart, 140, 191
- See Briggs, Mills, Elvehjem, and Hart, 144, 47
- See McKibbin, Schaefer, Elvehjem, and Hart, 145, 107
- See Briggs, Luckey, Elvehjem, and Hart, 148, 163
- See Briggs, Luckey, Teply, Elvehjem, and Hart, 148, 517
- See Briggs, Luckey, Elvehjem, and Hart, 150, 11
- See Spector, Maass, Michaud, Elvehjem, and Hart, 150, 75
- Harte, R. A.** See Landsteiner and Harte, 140, 673
- Hartman, Carl G.** See Marker and Hartman, 133, 529
- Hartung, Walter H.** See Hamlin and Hartung, 145, 349
- Haskin, Harold H.** A spectrophotometric method for the analysis of chloroplast pigments, 144, 149
- Hassid, W. Z., and Barker, H. A.** The structure of dextran synthesized from sucrose by *Betacoccus arabinosaceus*, Orla-Jensen, 134, 163
- See Doudoroff, Kaplan, and Hassid, 148, 67
- , Cori, Gerty T., and McCready, R. M. Constitution of the polysaccharide synthesized by the action of crystalline muscle phosphorylase, 148, 89
- , Baker, E. E., and McCready, R. M. An immunologically active polysaccharide produced by *Coccidioides*

- immitis* Rixford and Gilchrist, 149, 303
- Hastings, A. Baird.** See *Manery and Hastings*, 127, 657
- See *Cohn, Tannenbaum, Thalkimer, and Hastings*, 128, 109
- , *Muus, Jytte, and Bessey, Otto A.* Tissue metabolism in vitamin deficiencies. I. Effect of deficiencies in riboflavin and other heat-stable vitamin B components, 129, 295
- See *Muus, Weiss, and Hastings*, 129, 303
- See *Weir and Hastings*, 129, 547
- See *Danielson and Hastings*, 130, 349
- See *Danielson, Chu, and Hastings*, 131, 243
- See *Drinker, Green, and Hastings*, 131, 641
- See *Taylor and Hastings*, 131, 649
- See *Kiese and Hastings*, 132, 267, 281
- See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 133, 287
- See *Christensen and Hastings*, 136, 387
- See *Conant, Cramer, Hastings, Klemperer, Solomon, and Vennesland*, 137, 557
- See *Jandorf, Klemperer, and Hastings*, 138, 311
- See *Hutchens, Jandorf, and Hastings*, 138, 321
- See *Solomon, Vennesland, Klemperer, Buchanan, and Hastings*, 140, 171
- See *Vennesland, Solomon, Buchanan, Cramer, and Hastings*, 142, 371
- See *Vennesland, Solomon, Buchanan, and Hastings*, 142, 379
- See *McGee and Hastings*, 142, 893
- See *Lowry and Hastings*, 143, 257
- See *Lowry, Hastings, Hull, and Brown*, 143, 271
- See *Lowry, McCay, Hastings, and Brown*, 143, 281
- See *Klemperer, Hastings, and Van Slyke*, 143, 433
- See *Taylor and Hastings*, 144, 1
- Hastings, A. Baird—continued:**
- See *Wallace and Hastings*, 144, 637
- See *Buchanan, Hastings, and Nesbett*, 145, 715
- See *Tabor and Hastings*, 148, 627
- See *Buchanan, Hastings, and Nesbett*, 150, 413
- Haugen, Gladys E.** See *Friedemann and Haugen*, 144, 67
- 147, 415
- Haurowitz, Felix.** The prosthetic group of sulfhemoglobin, 137, 771
- , *Schwerin, Paula, and Yenson, M. Mutahhar.* Destruction of hemin and hemoglobin by the action of unsaturated fatty acids and oxygen, 140, 353
- Hauschildt, James D.** See *Evans and Hauschildt*, 145, 335
- Hauser, Charles R.** See *Peck and Hauser*, 134, 403
- Haven, Frances L., and Bale, William F.** The fate of phospholipid injected intravenously into the rat, 129, 23
- and *Levy, Sylvia Ruth.* The occurrence and rate of turnover of tumor sphingomyelin, 141, 417
- Hawes, Roland C.** See *Alles and Hawes*, 133, 375
- Heard, R. D. H.** See *Edson and Heard*, 130, 579
- and *McKay, A. F.* Steroids. II. The isolation of a new androstanol-3(β)-one and of allopregnanol-3(β)-one-20 from the urine of pregnant mares, 131, 371
- and *Hoffman, M. M.* The isolation of Δ -5,7,9-estratrienol-3-one-17 from the urine of pregnant mares, 135, 801
- and —. Steroids. III. The isolation from equine pregnancy urine of Δ -5,7,9-estratrienol-3-one-17, 138, 651
- and —. IV. The fate in man of injected α -estradiol, 141, 329
- , *Bauld, W. S., and Hoffman, M. M.* Steroids. V. α -Estradiol and progesterone metabolism, 141, 709
- Hebb, M. H.** See *Sharp, Hebb, Taylor, and Beard*, 142, 217
- Hechtman, John.** See *Anderson, Hechtman, and Seeley*, 126, 175

- Heegaard, Erik V. See *Horowitz and Heegaard*, 137, 475
- See *Alles and Heegaard*, 147, 487
- and *Alles, Gordon A.* Inhibitor specificity of amine oxidase, 147, 505
- Hegnauer, A. H. The effect of a low potassium diet and of desoxycorticosterone acetate on the cation content of rat erythrocytes and muscle, 150, 353
- Hegsted, D. Mark, Oleson, J. J., Elvehjem, C. A., and Hart, E. B. The "cartilage growth factor" and vitamin B₆ in the nutrition of chicks, 130, 423
- , Mills, R. C., Elvehjem, C. A., and Hart, E. B. Choline in the nutrition of chicks, 138, 459
- , Hier, S. W., Elvehjem, C. A., and Hart, E. B. The growth factors in cartilage for the chick, 139, 863
- , Briggs, G. M., Elvehjem, C. A., and Hart, E. B. The rôle of arginine and glycine in chick nutrition, 140, 191
- See *Hutchings, Bohonos, Hegsted, Elvehjem, and Peterson*, 140, 681
- Heidelberger, Michael. See *Menzel and Heidelberger*, 127, 221
- See *Karjala and Heidelberger*, 137, 189
- See *Mayer and Heidelberger*, 143, 567
- See *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 144, 541, 545
- , Treffers, Henry P., Schoenheimer, Rudolf, Ratner, S., and Rittenberg, D. Behavior of antibody protein toward dietary nitrogen in active and passive immunity, 144, 555
- Heinen, Harold J. See *Lough, Perilstein, Heinen, and Carter*, 139, 487
- Hekhuis, G. Leverne. See *Cohen and Hekhuis*, 140, 711
- Heller, V. G. See *MacVicar and Heller*, 137, 643
- Hellerman, Leslie. See *Richards and Hellerman*, 134, 237
- , Chinard, Francis P., and Deitz, Victor R. Protein sulfhydryl groups and the reversible inactivation of the enzyme urease. The reducing groups of egg albumin and of urease, 147, 443
- Hellman, L. M., Shettles, L. B., and Stran, Herbert. A quantitative method for the determination of sodium pentothal in blood, 148, 293
- Helmer, O. M., and Page, Irvine H. Purification and some properties of renin, 127, 757
- See *Corcoran, Helmer, and Page*, 129, 89
- Hemingway, Allan. See *Wood, Werkman, Hemingway, and Nier*, 135, 789
- 139, 365, 377, 483
- 142, 31
- See *Swendseid, Barnes, Hemingway, and Nier*, 142, 47
- See *Slade, Wood, Nier, Hemingway, and Werkman*, 143, 133
- See *Olsen, Hemingway, and Nier*, 148, 611
- Hendricks, Jeannette B. See *Morgan, Shimotori, and Hendricks*, 134, 761
- Hendrickson, Alma R. See *Bratton and Marshall*, 128, 537
- Hendrix, Byron M., and Dennis, Joe. Changes of nitrogen content brought about by denaturation of proteins, 126, 315
- Henny, George C. See *Spiegel-Adolf, Seibert, and Henny*, 137, 503
- Herbert, D. See *Green, Herbert, and Subrahmanyam*, 135, 795
- 138, 327
- Herbst, Robert M., and Shemin, David. The synthesis of peptides by transamination, 147, 541
- Herrlich, Herman. See *Bueding, Fazekas, Herrlich, and Himwich*, 148, 97
- Herrmann, Heinz. See *Friedenwald and Herrmann*, 146, 411
- Hershberg, E. B., and Wolfe, John K. A rapid extractor for urinary steroids, 133, 667
- See *Wolfe, Hershberg, and Fieser*, 136, 653
- , Wolfe, John K., and Fieser, Louis F. Polarographic determination of dehydroisandrosterone and other 3-hydroxy- Δ^5 -steroids, 140, 215
- and —. A rapid extractor for urinary steroids. II. Modifications for the

- simultaneous hydrolysis and extraction of urine with any solvent heavier than water, 141, 215
- Hess, W. C., and Sullivan, M. X. The cystine content of deaminized proteins, 128, 93
- See Sullivan, Hess, and Smith, 130, 741
- See Sullivan and Hess, 130, 745
- and Sullivan, M. X. Cystinuria. The effect of various amino acids on the excretion of cystine, 142, 3
- and —. Canine cystinuria. The effect of feeding cystine, cysteine, and methionine at different dietary protein levels, 143, 545
- See Sullivan, Hess, and Howard, 145, 621
- and Sullivan, M. X. The quantitative determination of lanthionine, 146, 15
- and —. Canine cystinuria. The cystine output on an arachin diet, 146, 381
- and —. Canine cystinuria. Urinary excretion of cystine following the administration of homocystine, homocysteine, and some derivatives of cystine and cysteine, 149, 543
- Hessel, F. H. See Scott, Randall, and Hessel, 141, 325
- Hester, Harold R. See Flock, Hester, and Bollman, 128, 153
- Heuser, G. F. See Schumacher, Heuser, and Norris, 135, 313
- See McGinnis, Norris, and Heuser, 145, 341
- Heymann, Walter, and Modic, J. L. Effect of age and fasting on glycogen content of liver and muscle of rats and puppies, 131, 297
- Hickman, K. C. D. See Bills, Massengale, Hickman, and Gray, 126, 241
- See Baxter, Harris, Hickman, and Robeson, 141, 991
- Hier, S. W. See Hegsted, Hier, Elvehjem, and Hart, 139, 863
- Hight, Doris M., and West, Edward S. A procedure for the determination of ascorbic acid based upon the use of a standardized solution of 2,6-dichlorophenol indophenol in xylene, 146, 655
- Hill, Elsie. See Koehler, Windsor, and Hill, 140, 811
- Hiller, Alma. See Van Slyke, Hiller, MacFadyen, Hastings, and Klempere, 133, 287
- See Van Slyke, Hiller, and MacFadyen, 141, 681
- See Van Slyke, Hiller, and Dillon, 146, 137
- See Beckman, Hiller, Shedlovsky, and Archibald, 148, 247
- See Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller, 150, 481
- Himwich, Harold E. See Fazekas and Himwich, 139, 971
- See Bueding, Fazekas, Herrlich, and Himwich, 148, 97
- Hines, Leonard R., and Mattill, H. A. The chemical determination of tocopherols in liver and muscle; tocopherol in urine and feces, 149, 549
- Hirschmann, H., and Wintersteiner, Oskar. Isoequilin A, 126, 737
- Androgens from the urine of ovariectomized women, 130, 421
- Steroids of urine of ovariectomized women, 136, 483
- Preparation of a pregnanetriol-3-(α), 17, 20, 140, 797
- Steroid excretion in a case of adrenocortical carcinoma. I. The isolation of a Δ^6 -androstetriol-3(β), -16, 17, 150, 363
- Hisey, Alan, and Morrison, Dempsey B. The oxygen uptake of dried hemoglobin, 130, 763
- Hitchings, George H. See Cleary, Maier, and Hitchings, 127, 403
- The estimation of guanine and xanthine, 139, 843
- and Fiske, Cyrus H. The determination of the purines, 140, 491
- and —. The estimation of adenine, 141, 827
- The estimation of hypoxanthine, 143, 43
- Hoagland, Charles L. See Goebel, Beeson, and Hoagland, 129, 455

Hoagland, Charles L.—continued:

- , Microdetermination of sulfate and phosphate by manometric combustion of their organic precipitates, 136, 543
- , Micromanometric determination of magnesium, 136, 553
- and Ward, S. M. The quantitative determination of factor V by measurement of nitrite produced by *Hemophilus influenzae*, 146, 115
- Hoberman, Henry D., and Rittenberg, D. Biological catalysis of the exchange reaction between water and hydrogen, 147, 211
- Hochberg, Melvin, Melnick, Daniel, Siegel, Louis, and Oser, Bernard L. Destruction of vitamin B₆ (pyridoxine) by light, 148, 253
- Hodge, Harold Carpenter. See MacLachlan and Hodge, 127, 721
- , See Manly, Hodge, and Manly, 134, 293
- , See Volker, Hodge, Wilson, and Van Voorhis, 134, 543
- , Van Huysen, Grant, Bonner, John F., and Van Voorhis, Stanley N. The adsorption of phosphates at forty degrees by enamel, dentin, bone, and hydroxyapatite as shown by the radioactive isotope, 138, 451
- , See MacLachlan, Hodge, and Whitehead, 139, 185
- , MacLachlan, P. L., Bloor, W. R., Stoneburg, Charles A., Oleson, Margaret C., and Whitehead, Raymond. Lipids of the fasting mouse. I. The relation between carcass lipids and liver lipids, 139, 897
- , See Steadman, Hodge, and Horn, 140, 71
- , See MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor, 143, 473
- , Koss, William F., Ginn, James T., Falkenheim, Marlene, Gavett, Elizabeth, Fowler, Richard C., Thomas, Isabell, Bonner, John F., and Des-sauer, Gerhard. The nature of the insoluble sodium of bone. The adsorption of sodium at forty degrees by bone, dentin, enamel, and hydroxy-

apatite as shown by the radioactive isotope, 148, 321

- Hodson, A. Z., and Morris, L. C. A fluorometric method for determining the riboflavin content of foodstuffs, 131, 621
- Hoffman, M. M. See Heard and Hoffman, 135, 801
- , 138, 651
- , 141, 329
- , See Heard, Bauld, and Hoffman, 141, 709
- , See Venning, Hoffman, and Browne, 146, 369
- , Kazmin, V. E., and Browne, J. S. L. The excretion of pregnanediol following the administration of desoxycorticosterone acetate to rabbits, 147, 259
- , See Venning, Hoffman, and Browne, 148, 455
- Hoffman, Olive D. See Beach, Bernstein, Hoffman, Teague, and Macy, 139, 57
- Hofmann, Klaus, and Bergmann, Max. The specificity of trypsin. II, 130, 81
- and —. The specificity of carboxypeptidase, 134, 225
- and —. The kinetics of the action of trypsin upon synthetic substrates, 138, 243
- , See du Vigneaud, Hofmann, Melville, and György, 140, 643
- , See du Vigneaud, Hofmann, Melville, and Rachele, 140, 763
- , Melville, Donald B., and du Vigneaud, Vincent. Characterization of the functional groups of biotin, 141, 207
- , See Melville, Hofmann, Hague, and du Vigneaud, 142, 615
- , Melville, Donald B., and du Vigneaud, Vincent. Adipic acid as an oxidation product of the diaminocarboxylic acid derived from biotin, 144, 513
- , See Melville, Hofmann, and du Vigneaud, 145, 101
- , Kilmer, Glen W., Melville, Donald B., du Vigneaud, Vincent, and Darby, Hugh H. The condensation of phenanthrenequinone with the diaminocarboxylic acid derived from biotin, 145, 503

Hofmann, Klaus—continued:

- See *Melville, Moyer, Hofmann, and du Vigneaud*, 146, 487
- Hogan, Albert G.** See *Guerrant and Hogan*, 128, 363
- and *Parrott, Ernest M.* Anemia in chicks caused by a vitamin deficiency, 132, 507
- , *Powell, Eugene L., and Guerrant, Ralph E.* Anemia from lysine deficiency in deaminized casein, 137, 41
- See *O'Dell and Hogan*, 149, 323
- Hogden, Corinne G.** See *Robinson, Price, and Hogden*, 126, 207, 213
- See *Robinson and Hogden*, 135, 707, 727
- 137, 239
- 140, 853
- Hogeboom, George H., and Adams, Mark H.** Mammalian tyrosinase and dopa oxidase, 145, 273
- Hogg, Bruce M.** See *Chargaff, Ziff, and Hogg*, 131, 35
- Hogness, T. R.** See *Altschul, Sidwell, and Hogness*, 127, 123
- See *Horecker, Stotz, and Hogness*, 128, 251
- See *Altschul and Hogness*, 129, 315
- See *Junowicz-Kocholaty and Hogness*, 129, 569
- See *Haas, Horecker, and Hogness*, 130, 425
- See *Altschul, Abrams, and Hogness*, 130, 427
- See *Junowicz-Kocholaty and Hogness*, 131, 187
- See *Haas, Horecker, and Hogness*, 136, 747
- See *Altschul, Abrams, and Hogness*, 136, 777
- See *Abrams, Altschul, and Hogness*, 142, 303
- See *Haas, Harrer, and Hogness*, 142, 835
- 143, 341
- Holcomb, W. F.** See *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 130, 433
- See *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 131, 357
- Hollaender, Alexander.** See *Davis, Hollaender, and Greenstein*, 146, 663
- Holmes, Harry N., and Corbet, Ruth E.** Catalytic effects of porous powders on pure vitamin A, 127, 449
- Holt, L. Emmett, Jr.** See *Albanese, Holt, Kajdi, and Frankston*, 148, 299
- Holtorff, A. F., and Koch, F. C.** The colorimetric estimation of 17-keto-steroids and their application to urine extracts, 135, 377
- Homan, D. M.** See *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 147, 47
- See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365
- Hood, Dorothy B.** See *Gurin and Hood*, 131, 211
- 139, 775
- See *Scudi, Buhs, and Hood*, 142, 323
- Hoover, Sam R., and Allison, Franklin E.** The growth metabolism of *Rhizobium*, with evidence on the interrelations between respiration and synthesis, 134, 181
- See *Lineweaver and Hoover*, 137, 325
- Horecker, B. L., Stotz, Elmer, and Hogness, T. R.** The promoting effect of aluminum, chromium, and the rare earths in the succinic dehydrogenase-cytochrome system, 128, 251
- See *Haas, Horecker, and Hogness*, 130, 425
- 136, 747
- , *Ma, T. S., and Haas, Erwin.* Note on the determination of microquantities of organic phosphorus, 136, 775
- The absorption spectra of hemoglobin and its derivatives in the visible and near infra-red regions, 148, 173
- Horn, Helen Wilson.** See *Steadman, Hodge, and Horn*, 140, 71
- Horn, Millard J., Jones, D. Breese, and Ringel, S. J.** Isolation of a new sulfur-

Horn, Millard J.—continued:

- containing amino acid (lanthionine) from sodium carbonate-treated wool, 138, 141
- and Jones, D. Breese. The isolation of lanthionine from human hair, chicken feathers, and lactalbumin, 139, 473
- and —. Isolation from *Astragalus pectinatus* of a crystalline amino acid complex containing selenium and sulfur, 139, 649
- , —, and Ringel, S. J. Isolation of mesolanthionine from various alkali-treated proteins, 144, 87
- , —, and —. Isolation of *dl*-lanthionine from various alkali-treated proteins, 144, 93
- See Jones, Divine, and Horn, 146, 571
- Horowitz, N. H., and Heegaard, Erik.** Experiments on the carboxylase of pea roots, 137, 475
- and Baumberger, J. Percy. Studies on the respiratory pigment of *Urechis* eggs, 141, 407
- and Beadle, G. W. A microbiological method for the determination of choline by use of a mutant of *Neurospora*, 150, 325
- Horvath, S. M., and Knehr, C. A.** Adaptation of the Folin-Malmros micro blood sugar method to the photoelectric colorimeter, 140, 869
- and Roughton, F. J. W. Improvements in the gasometric estimation of carbon monoxide in blood, 144, 747
- Hotchkiss, Rollin D.** The determination of peptide bonds in crystalline lactoglobulin, 131, 387
- and Dubos, René J. Fractionation of the bactericidal agent from cultures of a soil bacillus, 132, 791
- and —. Chemical properties of bactericidal substances isolated from cultures of a soil bacillus, 132, 793
- and —. Bactericidal fractions from an aerobic sporulating bacillus, 136, 803
- and —. The isolation of bactericidal substances from cultures of *Bacillus brevis*, 141, 155

Hotchkiss, Rollin D.—continued:

- See Lipmann, Hotchkiss, and Dubos, 141, 163
- The chemical nature of gramicidin and tyrocidine, 141, 171
- See Dubos, Hotchkiss, and Coburn, 146, 421
- Hottle, G. A., Lampen, J. O., and Pappenheimer, Alwin M., Jr.** Biotin as a growth factor for C203S strain of hemolytic streptococcus, Group A, 137, 457
- Houchin, O. Boyd, and Mattill, H. A.** The oxygen consumption, creatine, and chloride content of muscles from vitamin E-deficient animals as influenced by feeding α -tocopherol, 146, 301
- and —. The influence of parenteral administration of α -tocopherol phosphate on the metabolic processes in dystrophic muscle, 146, 309
- The *in vitro* effect of α -tocopherol and its phosphate derivative on oxidation in muscle tissue, 146, 313
- Hove, E., Elvehjem, C. A., and Hart, E. B.** The effect of zinc on alkaline phosphatases, 134, 425
- , —, and —. The relation of zinc to carbonic anhydrase, 136, 425
- See Wachtel, Hove, Elvehjem, and Hart, 138, 361
- Howard, H. W.** See Sullivan, Hess, and Howard, 145, 621
- Howard, Mary.** See Brown and Kolmer, 137, 525
- Howe, Paul E.** Edward Browning Meigs, 142, 1
- Howell, Stacey F.** The determination of the urea in chicken blood, 128, 573
- The determination of blood urea, 129, 641
- Hubard, Stephen S.** Reversible action of oxidized phenols in the deamination of certain amino acids, 126, 489
- Hubbard, Roger S., and Loomis, Ted A.** The determination of inulin, 145, 641
- Hubbell, Rebecca B.** See Vickery, Smith, Hubbell, and Nolan, 140, 613
- Huber, W., and Barlow, O. W.** Chemical and biological stability of crystalline

- vitamins D₂ and D₃ and their derivatives, 149, 125
- Huebner, Charles Ferdinand. See *Stahmann, Huebner, and Link*, 138, 513
- and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. VI. The synthesis of the δ -diketone derived from the hemorrhagic agent through alkaline degradation, 138, 529
- See *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 142, 941
- See *Link, Overman, Sullivan, Huebner, and Scheel*, 147, 463
- Huff, Jesse W., and Perlzweig, William A. Studies in nicotinic acid metabolism. III. Metabolism and synthesis of nicotinic acid in the rat, 142, 401
- and —. N¹-Methylnicotinamide, a metabolite of nicotinic acid in the urine, 150, 395
- and —. A rapid method of estimating N¹-methylnicotinamide in urine, 150, 483
- Huffman, Max N. See *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 130, 481
- , Thayer, Sidney A., and Doisy, Edward A. The isolation of α -dihydrotheelin from human placenta, 133, 567
- , MacCorquodale, D. W., Thayer, Sidney A., Doisy, Edward A., Smith, G. V., and Smith, O. W. The isolation of α -dihydrotheelin from human pregnancy urine, 134, 591
- See *Doisy, Huffman, Thayer, and Doisy*, 138, 283
- Hughes, Hettie B. A gravimetric method for the determination of carbonyl groups in ketosteroids, 140, 21
- Determination of the keto derivatives of cholic and desoxycholic acids in bile, 143, 11
- See *Schmidt and Hughes*, 143, 771
- See *Schmidt, Hughes, Green, and Cooper*, 145, 229
- Hughes, James. See *Saifer and Hughes*, 129, 273
- Hughes, James—continued:
- See *Saifer, Hughes, and Scudero*, 141, 495
- See *Saifer, Hughes, and Weiss*, 146, 527
- Hull, Tatiana Z. See *Lowry, Hastings, Hull, and Brown*, 143, 271
- Hummel, Frances C. See *Beach, Bernstein, Hummel, Williams, and Macy*, 130, 115
- Humoller, Fred L. A titrimetric method for the estimation of small amounts of glucose, 147, 281
- Hunt, Madison. See *du Vigneaud, Patterson, and Hunt*, 126, 217
- and du Vigneaud, Vincent. The synthesis of the next higher and lower homologues of *l*-carnosine: γ -aminobutyryl-*l*-histidine and glycyl-*l*-histidine, 127, 43
- and —. A further contribution on the relationship of the structure of *l*-carnosine to its depressor activity, 127, 727
- Hunter, Andrew. See *Gornall and Hunter*, 147, 593
- Hunter, F. Edmund. Occurrence of sphingomyelin in tissues of the cat, 144, 439
- and Levy, Sylvia Ruth. Occurrence and rate of turnover of sphingomyelin in tissues of normal and tumor-bearing rats, 146, 577
- Hutchens, John O., Jandorf, Bernhard J., and Hastings, A. Baird. Synthesis of diphosphopyridine nucleotide by *Chilomonas paramecium*, 138, 321
- Hutchings, B. L., Bohonos, N., Hegsted, D. Mark, Elvehjem, C. A., and Peterson, W. H. Relation of a growth factor required by *Lactobacillus casei* to the nutrition of the chick, 140, 681
- , —, and Peterson, W. H. Growth factors for bacteria. XIII. Purification and properties of an eluate factor required by certain lactic acid bacteria, 141, 521
- See *Skull, Hutchings, and Peterson*, 142, 913
- Hutchinson, John J. See *Goettsch, Lonstein, and Hutchinson*, 128, 9

- Hyde, Elizabeth. Glycine and histidine feeding and creatine, creatinine, and inorganic phosphorus excretion in man, 134, 95
 —. Creatine feeding and creatine-creatinine excretion in males and females of different age groups, 143, 301

I

- Ibsen, M. See *Sevag, Shelburne, and Ibsen*, 144, 711
 Ing, H. R., and Bergmann, Max. Semi-microestimation of amino acids, 129, 603
 Ingalls, Elizabeth N. See *Wyman and Ingalls*, 139, 877
 Ingalls, Janet K. See *Thomas, Ingalls, and Luck*, 129, 263
 Ingle, Dwight J. See *Flock, Ingle, and Bollman*, 129, 99
 —. See *Kuizenga, Wick, Ingle, Nelson, and Cartland*, 147, 561
 Irish, Oliver J. See *du Vigneaud, Wood, and Irish*, 129, 171
 —. See *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 131, 273
 Irvin, J. Logan, and Wilson, D. Wright. Studies on octopine. I. The synthesis and titration curve of octopine, 127, 555
 — and —. II. The nitrogenous extractions of squid and octopus muscle, 127, 565
 — and —. III. The precursor of octopine in autolyzing scallop muscle, 127, 575
 —. See *Johnston, Irvin, and Walton*, 131, 425
 —, Merker, Harvey, Anderson, Carl E., and Johnston, Charles G. The comparison of desiccated and normal hog gallbladder bile, 131, 439
 Irving, George W., Jr. See *Fruton, Irving, and Bergmann*, 132, 465
 —. See *Cohn, Irving, and du Vigneaud*, 137, 635
 Irving, George W., Jr.—*continued*:
 —, Fruton, Joseph S., and Bergmann, Max. Kinetics of proteinase action. Application to specificity problems, 138, 231
 —. See *Fruton, Irving, and Bergmann*, 138, 249
 —, Fruton, Joseph S., and Bergmann, Max. The activation of intracellular proteinases, 139, 569
 —. See *Fruton, Irving, and Bergmann*, 141, 763
 —, Fruton, Joseph S., and Bergmann, Max. On the proteolytic enzymes of animal tissues. IV. Differences between aerobic and anaerobic proteolysis, 144, 161
 Irving, Laurence. See *Scholander, Irving, and Grinnell*, 142, 431
 —. See *Scholander, Edwards, and Irving*, 148, 495
 Isbell, Edith R. See *Mitchell, Isbell, and Thompson*, 147, 485
 —. See *Thompson, Isbell, and Mitchell*, 148, 281
 Isbell, Harris, Wooley, Jerald G., Butler, R. E., and Sebrell, W. H. A bacterial assay method for nicotinamide and related substances in blood, urine, and spinal fluid, 139, 499
 —. Effect of *p*-aminobenzoic acid on the microbiological assay for nicotinic acid, 144, 567
 Ivy, A. C. See *Gray, Ivy, and Cuthbert*, 128, 173
 —. See *Chen, Freeman, and Ivy*, 132, 445

J

- Jackson, Richard W. See *Cahill and Jackson*, 126, 29
 — and Cahill, William M. The racemization of amino acids on acetylation with ketene, 126, 37
 —. See *Cahill and Jackson*, 126, 627
 —. See *Gordon, Cahill, and Jackson*, 131, 189
 —. The excretion of kynurenic acid by members of various families of the order Carnivora, 131, 469

- Jacobi, H. P., Baumann, C. A., and Meek, W. J. The choline content of rats on various choline-free diets, 138, 571
- and —. The biochemical defect in choline-deficient rats, 142, 65
- Jacobs, Walter A., and Gould, R. Gordon, Jr. The ergot alkaloids. XVI. Further studies of the synthesis of substances related to lysergic acid, 126, 67
- and Craig, Lyman C. Delphinine, 127, 361
- and —. Delphinine. II. On oxodelphinine, 128, 431
- , Elderfield, Robert C., and Craig, Lyman C. The aconite alkaloids. II. The formula of oxonitine, 128, 439
- and Craig, Lyman C. The ergot alkaloids. XVII. The dimethylindole from dihydrolysergic acid, 128, 715
- See *Craig and Jacobs*, 129, 79
- and Gould, R. Gordon, Jr. The ergot alkaloids. XVIII. The production of a base from lysergic acid and its comparison with synthetic 6,8-dimethylergoline, 130, 399
- See *Gould and Jacobs*, 130, 407
- See *Craig and Jacobs*, 134, 123
- and Craig, Lyman C. Delphinine. III. The action of hydrochloric, nitric, and nitrous acids on delphinine and its derivatives, 136, 303
- and —. The aconite alkaloids. III. The oxidation of aconitine and derivatives with nitric acid and chromic acid, 136, 323
- See *Craig and Jacobs*, 139, 263
- See *Craig, Jacobs, and Lavin*, 139, 277
- See *Craig and Jacobs*, 139, 293
- and Van Slyke, Donald D. Phoebeus Aaron Theodor Levene, 141, 1
- , Craig, Lyman C., and Lavin, George I. The veratrine alkaloids. XI. The dehydrogenation of jervine, 141, 51
- and —. The aconite alkaloids. VII. On staphisine, a new alkaloid from *Delphinium staphisagria*, 141, 67
- See *Craig and Jacobs*, 141, 253
- 143, 427
- Jacobs, Walter A.—*continued*:
- and Craig, Lyman C. The aconite alkaloids. VIII. On atisine, 143, 589
- and —. IX. The isolation of two new alkaloids from *Aconitum heterophyllum*, heteratisine and hetisine, 143, 605
- See *Craig and Jacobs*, 143, 611
- See *Gould, Craig, and Jacobs*, 145, 487
- and Craig, Lyman C. The aconite alkaloids. XI. The action of methyl alcoholic sodium hydroxide on atisine. Isoatisine and dihydroatisine, 147, 567
- and —. XII. Benzoyl heteratisine, a new alkaloid from *Aconitum heterophyllum*, 147, 571
- and —. The veratrine alkaloids. XV. On rubijervine and isorubijervine, 148, 41
- and —. XVI. The formulation of jervine, 148, 51
- See *Craig and Jacobs*, 148, 57
- and Craig, Lyman C. The veratrine alkaloids. XIX. On protoveratrine and its alkamine, protoverine, 149, 271
- See *Craig and Jacobs*, 149, 451
- Jacobsen, C. F. See *Linderstrøm-Lang and Jacobsen*, 137, 443
- Jacoby, T. F. See *Theis and Jacoby*, 146, 163
- 148, 105, 603
- Jaffe, Herbert. See *Gould, Tytell, and Jaffe*, 146, 219
- Jaffé, Werner G. A simple method for the approximate estimation of the isoelectric point of soluble proteins, 148, 185
- Hurain, a new plant protease from *Hura crepitans*, 149, 1
- Jandorf, Bernard J. A method for the isolation of diphosphopyridine nucleotide, 138, 305
- , Klemperer, Friedrich W., and Hastings, A. Baird. A manometric method for the determination of diphosphopyridine nucleotide, 138, 311
- See *Hutchens, Jandorf, and Hastings*, 138, 321

Jandorf, Bernard J.—*continued*:

- The stability of diphosphopyridine nucleotide in rat tissues, 150, 89
- Jansen, E. F., and Balls, A. K. Chymopapain: a new crystalline proteinase from papaya latex, 137, 459
- Jaques, L. B. Heparinase, 133, 445
- , Waters, E. T., and Charles, A. F. A comparison of the heparins of various mammalian species, 144, 229
- Jellinek, E. Morton, and Looney, Joseph M. Statistics of some biochemical variables on healthy men in the age range of twenty to forty-five years, 128, 621
- Jen, Pong C., and Lewis, Howard B. The metabolism of sulfur. XXVI. The metabolism of the betaine of cystine, 127, 97
- Jennings, Robert K. See *Weil and Jennings*, 139, 421
- Jenrette, Wendell V. See *Greenstein, Jenrette, Mider, and White*, 137, 795
- See *Greenstein, Jenrette, and White*, 141, 327
- See *Greenstein and Jenrette*, 142, 175
- Jensen, H., and Tolksdorf, Sibylle. The effect of picric and flavianic acids on the potency of the follicle-stimulating anterior pituitary hormone, 132, 519
- See *Grattan and Jensen*, 135, 511
- , Tolksdorf, Sibylle, and Bamman, Frieda. Purification of the interstitial cell-stimulating and follicle-stimulating hormones of the pituitary, 135, 791
- See *Tenenbaum and Jensen*, 145, 293
- 147, 27
- and Tenenbaum, Leon E. Further purification of catecholase (tyrosinase), 147, 737
- Jensen, James L., Shantz, Edgar M., Embree, Norris D., Cawley, John D., and Harris, Philip L. The biological activity of vitamin A₂, 149, 473
- Jensen, O. G. See *Noll and Jensen*, 140, 755
- See *Supplee, Jensen, Bender, and Kahlenberg*, 144, 79

- Jervis, George A. Metabolic investigations on a case of phenylpyruvic oligophrenia, 126, 305
- , Block, Richard J., Bolling, Diana, and Kanze, Edna. Chemical and metabolic studies on phenylalanine. II. The phenylalanine content of the blood and spinal fluid in phenylpyruvic oligophrenia, 134, 105
- See *Block, Jervis, Bolling, and Webb*, 134, 567
- John, H. M. See *Nachmansohn, John, and Waelsch*, 150, 485
- Johns, Helen E. See *Greaves, Freiberg, and Johns*, 133, 243
- See *Bulger and Johns*, 140, 427
- Johnson, B. Connor. See *Wiese and Johnson*, 127, 203
- See *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 127, 411
- Johnson, C. R. See *Koenig and Johnson*, 142, 233
- 143, 159
- Johnson, J. M. A comparison of the optical forms of glutamic acid from normal and cancerous tissue, 132, 781
- The racemization of glutamic acid, 134, 459
- Johnson, Julius E. See *Rose, Johnson, and Haines*, 145, 679
- See *Rose, Haines, and Johnson*, 146, 683
- See *Rose, Haines, Johnson, and Warner*, 148, 457
- Johnson, Marvin J. See *Christensen, Johnson, and Peterson*, 127, 421
- See *Berger and Johnson*, 130, 641, 655
- 133, 157, 639
- See *Berger, Johnson, and Baumann*, 137, 389
- Isolation and properties of a pure yeast polypeptidase, 137, 575
- See *Gailey and Johnson*, 141, 921
- See *Koepsell and Johnson*, 145, 379
- Johnston, Charles G., Irvin, J. Logan, and Walton, Clarence. The free choline and phospholipid of hepatic and gallbladder bile, 131, 425

Johnston, Charles G.—continued:

- See *Irvin, Merker, Anderson, and Johnston*, 131, 439

Johnston, Cornelia. See *Deuel, Halliday, Hallman, Johnston, and Miller*, 139, 479

- and *Deuel, Harry J., Jr.* Studies on ketosis. XXI. The comparative metabolism of the hexitols, 149, 117

Johnston, J. H. See *Barrett and Johnston*, 127, 765

Jolliffe, Norman. See *Rosenblum and Jolliffe*, 134, 137

Jones, Chase Breese. See *Ecker, Pillemmer, Jones, and Seifter*, 135, 347

Jones, D. Breese, and Gersdorff, Charles E. F. Studies on digestibility of proteins *in vitro*. VII. Liberation of cystine on tryptic digestion of casein, with observations on the instability of cystine toward alkali, 129, 207

- See *Horn, Jones, and Ringel*, 138, 141

- See *Horn and Jones*, 139, 473, 649

- See *Horn, Jones, and Ringel*, 144, 87, 93

- , *Divine, J. P., and Horn, Millard J.* A study of the availability of meso-lanthionine for the promotion of growth when added to a cystine-deficient diet, 146, 571

Jones, G. E. Seegar. See *Astwood and Jones*, 137, 397

Jones, H. B., Chaikoff, I. L., and Lawrence, John H. Radioactive phosphorus as an indicator of phospholipid metabolism. VI. The phospholipid metabolism of neoplastic tissues (mammary carcinoma, lymphoma, lymphosarcoma, Sarcoma 180), 128, 631

- , —, and —. X. The phospholipid turnover of fraternal tumors, 133, 319

- See *Sheline, Chaikoff, Jones, and Montgomery*, 147, 409
149, 139

Jones, James H. The relation of the pH of intestinal contents to calcium and phosphorus utilization, 142, 557

Jones, L. R. See *Roberts, Cain, Muir,*

Jones, L. R.—continued:

Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy, 147, 47

- See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365

Jones, Lois M. See *Shinowara, Jones, and Reinhart*, 142, 921

- and *Shinowara, George Y.* Serum inorganic phosphate and "alkaline" phosphatase activity in hypophysectomized rats, 142, 935

Jones, R. N. See *Talbot, Butler, MacLachlan, and Jones*, 136, 365

Joseph, Michael, Cohn, Waldo E., and Greenberg, David M. Studies in mineral metabolism with the aid of artificial radioactive isotopes. II. Absorption, distribution, and excretion of potassium, 128, 673

Joseph, Norman R. Heterogeneous equilibrium of protein solutions. II. The interaction of calcium chloride and other salts with proteins, as determined by a new type of calcium amalgam electrode, 126, 389

- Purification of crystalloids and colloids by electro dialysis, 126, 403

- Interaction of amino acids and salts. III. The determination of the activities of calcium, barium, and strontium chloride in amino acid solutions by means of electrodes of the third kind, 130, 203

Juday, Chancey. See *Field, Elvehjem, and Juday*, 148, 261

Jukes, Thomas H. Experiments with the filtrate factor, 128, 35

- The pantothenic acid requirement of the chick, 129, 225

- Effect of yeast extract and other supplements on the growth of chicks fed simplified diets, 133, 631

- Prevention of perosis by choline, 134, 789

- and *Welch, A. D.* The effect of certain analogues of choline on perosis, 146, 19

Junowicz-Kocholaty, R., and Hogness, T. R. The spectroscopic determina-

Junowicz-Kocholaty, R.—*continued*:
tion of cytochrome C and its distribu-
tion in some mammalian tissues,

129, 569

—and **Hogness, T. R.** The spectroscopic
determination of cytochrome C and its
distribution in some mammalian tis-
sues. A correction, 131, 187

— See *Meyerhof and Junowicz-
Kocholaty*, 145, 443

149, 71

K

Kabat, Elvin A. A polysaccharide in
tumors due to a virus of leucosis and
sarcoma of fowls, 130, 143

Kaaser, Harold E. See *Sutton, Kaaser,
and Hansard*, 144, 183

Kahlenberg, O. J. See *Supplee, Jensen,
Bender, and Kahlenberg*, 144, 79

Kajdi, Charlotte N. See *Albanese, Holt,
Kajdi, and Frankston*, 148, 299

Kalckar, Herman M. See *Colowick,
Kalckar, and Cori*, 137, 343

— See *Colowick and Kalckar*, 137, 789

— The enzymatic action of myokinase,
143, 299

— See *Colowick and Kalckar*, 148, 117

— The rôle of myokinase in transphos-
phorylations. II. The enzymatic ac-
tion of myokinase on adenine nucle-
otides, 148, 127

Kamin, Henry. See *Klein and Kamin*,
138, 507

Kamm, Oliver. See *Ewing, Vandenberg,
and Kamm*, 131, 345

— See *Emmett, Brown, and Kamm*,
132, 467

— See *Emmett, Kamm, and Sharp*,
133, 285

— See *Ewing, Tomkins, and Kamm*,
147, 233

Kane, Lewis W. See *Logan and Kane*,
127, 705

Kanze, Edna. See *Jervis, Block, Bol-
ling, and Kanze*, 134, 105

Kao, Hsueh-Chung. See *Conner, Kao,
and Sherman*, 139, 835

Kaplan, Nathan. See *Doudoroff,
Kaplan, and Hassid*, 148, 67

— and **Greenberg, David M.** Observa-

tions with P^{32} of the changes in the
acid-soluble phosphates in the liver
coincident to alterations in carbo-
hydrate metabolism, 150, 479

Kapp, Eleanor M. Microestimation of
uronic acids, 134, 143

— and **Coburn, Alvin F.** Urinary metab-
olites of sodium salicylate, 145, 549

Karady, S., Selye, H., and Browne, J. S.
L. Changes in the chloride distribu-
tion between red blood cells and
plasma during the course of the
general adaptation syndrome,
131, 717

**Karjala, Sulo A., and Heidelberger,
Michael.** Specific and non-specific
cell polysaccharides of an avian
strain of tubercle bacillus, 137, 189

Karush, F. See *Talbot, Wolfe, Mac-
Lachlan, Karush, and Butler*,
134, 319

Kassan, Robert J., and Roe, Joseph H.
The preservation of ascorbic acid in
drawn samples of blood, 133, 579

Kassell, Beatrice. See *Brand and
Kassell*, 131, 489

— See *Brand, Cahill, and Kassell*,
133, 431

— See *Brand and Kassell*, 133, 437

141, 999

145, 359, 365

Kaster, Robert B. See *Anderson,
Kaster, and Seeley*, 144, 767

Katersky, Evelyn M. See *Lowry, Gil-
ligan, and Katersky*, 139, 795

**Katzenelbogen, E., Axelrod, A. E.,
and Elvehjem, C. A.** The coenzyme I
content of rat tissues in experimental
hyperthyroidism, 141, 611

Katzenelbogen, Solomon. See *Snyder
and Katzenelbogen*, 143, 223

Katzman, Philip A. See *Roberts, Cain,
Muir, Reithel, Gaby, Van Bruggen,
Homan, Katzman, Jones, and Doisy*,
147, 47

— See *Van Bruggen, Reithel, Cain,
Katzman, Doisy, Muir, Roberts, Gaby,
Homan, and Jones*, 148, 365

—, **Godfrid, Marcos, Cain, C. K., and
Doisy, Edward A.** The preparation

- of chorionic gonadotropin by chromatographic adsorption, 148, 501
- Kaye, Irving Allan, Leibner, I. Wallace, and Connor, Edwin B. Apparatus for the continuous drying and extraction of biological materials. Application to the extraction of the neutral fat fraction of feces, 132, 195
- , —, and Sobel, Albert E. Improved apparatus for the extraction of lipids from liquids and solids, with further applications to the fractionation of fecal fat, 138, 643
- Kazal, Louis A. See *Arnow, Kazal, and De Falco*, 145, 347
- Kazmin, V. E. See *Hoffman, Kazmin, and Browne*, 147, 259
- Kelley, Edward G. Reactions of dyes with cell substances. IV. Quantitative comparison of tissue nuclei and extracted nucleoproteins, 127, 55
- V. Differential basic dye combination of tissue nuclei with special reference to resting and mitotic cells of tumor tissue, 127, 73
- Kelsey, F. E. Determination of cholesterol, 127, 15
- The use of lipase in lipid analyses. I. Specificity of castor bean lipase, 130, 187
- II. Specificity of pancreatic lipase, 130, 195
- III. The action of castor bean and pancreatic lipase on blood neutral fat, 130, 199
- and Longenecker, Herbert E. Distribution and characterization of beef plasma fatty acids, 139, 727
- Kelch, A. K. See *Krahl, Kelch, and Clowes*, 136, 563
- Kemmerer, A. R. See *Wegner, Kemmerer, and Fraps*, 144, 731
- 146, 547
- Kemmerer, Kenneth S. See *Mueller, Kemmerer, Cox, and Barnes*, 134, 573
- Kemp, Emily J. See *Oster*, 131, 13
- Kendall, Edward C., Flock, Eunice V., Bollman, Jesse L., and Mann, Frank C. The influence of cortin and sodium chloride on carbohydrate and mineral metabolism in adrenalectomized dogs, 126, 697
- Kendall, Forrest E. Studies on human serum proteins. II. Crystallization of human serum albumin, 138, 97
- Kendrick, A. B., and Hanke, Martin E. The effect of iodine and mercury on amino nitrogen values with nitrous acid, 132, 739
- Kennedy, Ethelmay. See *Ralli, Clarke, and Kennedy*, 141, 105
- Kensler, C. J., Young, N. F., and Rhoads, C. P. The inhibition of yeast carboxylase by split-products of N,N-dimethylaminoazobenzene, 143, 465
- Keppel, Dorothy M. See *du Vigneaud, Chandler, Moyer, and Keppel*, 131, 57
- Keresztesy, John C. See *du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris*, 146, 475
- Kerr, Stanley E. The determination of purine nucleotides and nucleosides in blood and tissues, 132, 147
- On the preparation of adenosine triphosphate, 139, 121
- Notes on the preparation of muscle adenylic acid, 139, 131
- Studies on the phosphorus compounds of brain. II. Adenosine triphosphate, 140, 77
- III. Determinations of adenosine triphosphate and its decomposition products in fresh and autolyzed dog brain, 145, 647
- Kesselman, Joseph. See *Anderson, Kesselman, and Bennett*, 140, 563
- Keston, Albert S. See *Rittenberg, Keston, Rosebury, and Schoenheimer*, 127, 291
- , Rittenberg, D., and Schoenheimer, Rudolf. Studies in protein metabolism. IV. The stability of nitrogen in organic compounds, 127, 315
- See *Schoenheimer, Rittenberg, and Keston*, 127, 385
- See *Rittenberg, Schoenheimer, and Keston*, 128, 603
- See *Chargaff and Keston*, 134, 515

Keston, Albert S.—*continued:*

- See *Ratner, Rittenberg, Keston, and Schoenheimer*, 134, 665

Kety, Seymour S. The lead citrate complex ion and its rôle in the physiology and therapy of lead poisoning, 142, 181

Keys, Ancel. A rapid micro-Kjeldahl method, 132, 181

— See *Taylor and Keys*, 148, 379

— See *Mickelsen and Keys*, 149, 479

Kibrick, Andre C. See *Greenwald, Redish, and Kibrick*, 135, 65

— See *Cannam, Palmer, and Kibrick*, 142, 803

Kies, Marian W., Dyer, Helen M., Wood, John L., and du Vigneaud, Vincent. A study of the utilization of the optical isomers of N,N'-dimethylcystine, 128, 207

— See *du Vigneaud, Dyer, and Kies*, 130, 325

— and *Schwimmer, Sigmund.* Observations on proteinase in brain, 145, 685

— See *Balls, Axelrod, and Kies*, 149, 491

Kiese, Manfred, and Hastings, A. Baird. The catalytic hydration of carbon dioxide, 132, 267

— and —. Factors affecting the activity of carbonic anhydrase, 132, 281

Kilmer, Glen W., Armstrong, Marvin D., Brown, George Bosworth, and du Vigneaud, Vincent. Synthesis of a 3,4-diaminotetrahydrothiophene and a comparison of its stability with the diaminocarboxylic acid derived from biotin, 145, 495

— See *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 145, 503

Kimball, Sydnette. See *Wendel and Kimball*, 145, 343

Kinard, Fredrick W. See *Aull and Kinard*, 135, 119

King, C. G. See *Green, McCarthy, and King*, 128, 447

— See *McCarthy, Green, and King*, 128, 455

— See *Musulin, Tully, Longenecker, and King*, 129, 437

King, C. G.—*continued:*

— See *Longenecker, Musulin, Tully, and King*, 129, 445

— See *Schultze, Harrer, and King*, 131, 5

— See *Longenecker, Fricke, and King*, 135, 497

— See *Harrer and King*, 138, 111

— See *Smythe and King*, 142, 529

— See *Drake, Smythe, and King*, 143, 89

King, W. C. See *Treadwell, King, Bebb, and Tidwell*, 143, 203

Kingsley, George R. The determination of serum total protein, albumin, and globulin by the biuret reaction, 131, 197

— A rapid method for the separation of serum albumin and globulin, 133, 731

Kirch, Ernst R., and Bergeim, Olaf. The chemical determination of thiamine, 143, 575

— and —. Determination of p-aminobenzoic acid, 148, 445

— See *Martinek, Kirch, and Webster*, 149, 245

Kirk, Paul L. See *Sisco, Cunningham, and Kirk*, 139, 1

— See *Cunningham, Kirk, and Brooks*, 139, 11, 21

— See *Tompkins and Kirk*, 142, 477

— See *Sandkuhle, Kirk, and Cunningham*, 146, 427

Kirsner, Joseph B. The serum electrolytes in the dog before and during acute alkalosis induced by sodium bicarbonate, 145, 219

Kistiakowsky, G. B. See *Cramer and Kistiakowsky*, 137, 549

— See *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 139, 787

Klein, Daniel. The determination of acetone and acetoacetic acid in blood by the bisulfite-binding method and its relation to pyruvic acid, 135, 143

— The determination of pyruvic acid in blood in the presence of acetoacetic acid, 137, 311

— The effects of administration of

- glucose and insulin on blood pyruvate and lactate in diabetes mellitus, 145, 35
- Klein, J. Raymond.** Effect of thyroid feeding and thyroidectomy on the oxidation of amino acids by rat kidney and liver, 128, 659
- See *Kohn and Klein*, 130, 1
- Nature of the increase in activity of the *d*-amino acid oxidase of rat liver produced by thyroid feeding, 131, 139
- The oxidation of *l*(-)-aspartic and *l*(+)-glutamic acids by *Hemophilus parainfluenzae*. Note on the preparation of pyridine nucleotides from bakers' yeast by the method of Warburg and Christian, 134, 43
- See *Kohn and Klein*, 135, 685
- and *Kohn, Henry I.* The synthesis of flavin-adenine dinucleotide from riboflavin by human blood cells *in vitro* and *in vivo*, 136, 177
- See *Handler, Bernheim, and Klein*, 138, 203, 211
- and *Kamin, Henry.* Inhibition of the *d*-amino acid oxidase by benzoic acid, 138, 507
- and *Handler, Philip.* Specificity of the *d*-amino acid oxidase, 139, 103
- See *Bernheim and Klein*, 139, 827
- See *Handler and Klein*, 143, 49
- 144, 453
- and *Handler, Philip.* Effect of diphosphopyridine nucleotide on the rate of oxidation of betaine aldehyde, 144, 537
- , *Perlzweig, William A.*, and *Handler, Philip.* Determination of nicotinic acid in blood cells and plasma, 145, 27
- Kleiner, Israel S.** A new color reaction for the phenolic steroids (naturally occurring estrogens), 138, 783
- Kleinman, Abram.** See *Lightbody and Kleinman*, 129, 71
- Klemperer, Friedrich W.** See *Greenstein and Klemperer*, 128, 245
- See *Greenstein, Klemperer, and Wyman*, 129, 681
- Klemperer, Friedrich W.**—*continued*:
- See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 133, 287
- See *Conant, Cramer, Hastings, Klemperer, Solomon, and Vennesland*, 137, 557
- See *Jandorf, Klemperer, and Hastings*, 138, 311
- See *Solomon, Vennesland, Klemperer, Buchanan, and Hastings*, 140, 171
- , *Hastings, A. Baird*, and *Van Slyke, Donald D.* The dissociation constants of hydroxylysine, 143, 433
- Kline, B. E.** See *Deutsch, Kline, and Rusch*, 141, 529
- Klinghoffer, Kaimen A.** The effect of monoiodoacetic acid on the intestinal absorption of monosaccharides and sodium chloride, 126, 201
- Klose, A. A.** See *Almquist and Klose*, 130, 787, 791
- and *Almquist, H. J.* Synthesis of vitamin K₁, 132, 469
- and —. The ability of citrulline to replace arginine in the diet of the chick, 135, 153
- and —. Methionine in the diet of the chick, 138, 467
- Knehr, C. A.** See *Horvath and Knehr*, 140, 869
- Kniazuk, Michael.** See *Webb and Kniazuk*, 128, 511
- Knight, C. A.**, and *Stanley, W. M.* Preparation and properties of cucumber virus 4, 141, 29
- and —. Aromatic amino acids in strains of tobacco mosaic virus and in the related cucumber viruses 3 and 4, 141, 39
- and *Lauffer, Max A.* A comparison of the alkaline cleavage products of two strains of tobacco mosaic virus, 144, 411
- The physical and chemical properties of a distinctive strain of tobacco mosaic virus, 145, 11
- The sulfur distribution in the ribgrass strain of tobacco mosaic virus, 147, 663

- Knodt, C. B. See *Shaw and Knodt*,
138, 287
- Knott, Leslie. See *Deuel and Hallman*,
140, 545
- Knox, W. E. See *Green, Knox, and Stumpf*,
138, 775
- See *Green, Westerfeld, Vennesland, and Knox*,
140, 683
145, 69
- Knudson, Arthur. See *Sturges and Knudson*,
126, 543
- , *Sturges, Stuart, and Bryan, W. Ray*.
Cholesterol content of skin, blood, and
tumor tissue in rats irradiated with
ultraviolet light, 128, 721
- Koch, F. C. See *Blauch and Koch*,
130, 443, 455
- See *Blauch, Koch, and Hanke*,
130, 471
- See *Holtorff and Koch*, 135, 377
- See *Coffman and Koch*, 135, 519
- Kochakian, Charles D., and Clark,
Leland C., Jr. The effect of testos-
terone propionate on the arginase
content of the liver, kidney, and
intestine, 143, 795
- Koehler, Alfred E., Windsor, Emanuel,
and Hill, Elsie. Acetone and aceto-
acetic acid studies in man, 140, 811
- Koehn, C. J., and Sherman, W. C. The
determination of vitamin A and
carotene with the photoelectric color-
imeter, 132, 527
- Koenemann, Richard H. A modification
of the Miller-Muntz method for
colorimetric determination of lactic
acid, 135, 105
- Koenig, Ruth Adele, and Johnson, C. R.
Spectrophotometric determination of
iron. I. Use of mercaptoacetic acid,
142, 233
- and —. II. Use of 2,2'-bipyridine,
143, 159
- Koenig, Virgil L., Melzer, Francisca,
Szego, Clara M., and Samuels, Leo T.
A colorimetric reaction for testos-
terone, 141, 487
- Koepsell, H. J., and Johnson, Marvin J.
Dissimilation of pyruvic acid by cell-
free preparations of *Clostridium but-
ylicum*, 145, 37
- Kohl, Mathias F. F. A balance sheet of
fat absorption. I. The storage of
elaïdic acid by the rat over a one day
period, 126, 709
- II. The storage of elaïdic acid by
the rat over periods of several days,
126, 721
- III. The disappearance of elaïdic
acid from the tissues of the rat,
126, 731
- Kohler, G. O., Elvehjem, C. A., and
Hart, E. B. The relation of pyrrole-
containing pigments to hemoglobin
synthesis, 128, 501
- Kohn, Henry I., and Klein, J. Raymond.
The synthesis of cozymase and of
factor V from nicotinic acid by the
human erythrocyte *in vitro* and *in
vivo*, 130, 1
- and —. Synthesis of factor V (pyri-
dine nucleotides) from nicotinic acid
in vitro by human erythrocytes,
135, 685
- See *Klein and Kohn*, 136, 177
- See *Dann and Kohn*, 136, 435
- See *Harris and Kohn*, 141, 989
- See *Handler and Kohn*, 150, 447
- Kolb, Joseph J. See *Toennies and Kolb*,
126, 367
128, 399
- and *Toennies, Gerrit*. Methionine
studies. IV. A color reaction of
methionine, 131, 401
- See *Toennies and Kolb*, 140, 131
- and *Toennies, Gerrit*. The investiga-
tion of amino acid reactions by meth-
ods of non-aqueous titrimetry. I.
Acetylation and formylation of amino
groups, 144, 193
- See *Toennies and Kolb*, 144, 219
- Kolmer, John A. See *Brown and Kolmer*,
137, 525
- Kolthoff, I. M. See *Cohn and Kolthoff*,
147, 705
148, 711
- Koppius, O. G. See *Duffendack, Thom-
son, Lee, and Koppius*, 126, 1
- Koran, Pearl. See *Belfer, Koran, Eder,
and Bradley*, 147, 345
- Kordecki, Frank A. See *Bock*, 140, 519

- Koser, Stewart A. See *Saunders, Dorfman, and Koser*, 138, 69
 —. See *Dorfman, Berkman, and Koser*, 144, 393
- Koss, William F. See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 148, 321
- Kraemer, E. O. See *Krejci, Stock, Sanigar, and Kraemer*, 142, 785
- Krahl, M. E., Keltch, A. K., and Clowes, G. H. A. Inhibition of flavoprotein oxidative catalysis by substituted phenols, 136, 563
- Kramer, Benjamin. See *Sobel, Yuska, Peters, and Kramer*, 132, 239
 —. See *Sobel, Kraus, and Kramer*, 140, 501
 —. See *Sobel, Hanok, and Kramer*, 144, 363
- Krampitz, L. O. See *Woolley and Krampitz*, 146, 273
 —, Wood, H. G., and Werkman, C. H. Enzymatic fixation of carbon dioxide in oxalacetate, 147, 243
- Krantz, John C., Jr. See *Ellis and Krantz*, 141, 147
- Kratzer, F. H. See *Almquist, Mecchi, and Kratzer*, 141, 365
 —. See *Almquist, Kratzer, and Mecchi*, 148, 17
- Kraus, George. See *Sobel, Kraus, and Kramer*, 140, 501
- Krause, R. F. Changes induced by anemia in the bone marrow lipids of cats, 149, 395
- Krauss, B. H. See *Sideris, Young, and Krauss*, 126, 233
- Kraybill, H. R. See *Beadle, Greenwood, and Kraybill*, 149, 339
 —. See *Greenwood, Beadle, and Kraybill*, 149, 349
- Krejci, L. E., Stock, A. H., Sanigar, E. B., and Kraemer, E. O. Studies on the hemolytic streptococcus. V. The electrophoretic isolation of the erythrogenic toxin of scarlet fever and the determination of its chemical and physical properties, 142, 785
- Kremers, Roland E. See *Sell and Kremers*, 126, 501
- Kress, Bernard H. See *Turner, Kress, and Harrison*, 148, 581
- Kreysa, Frank J. See *Van Slyke and Kreysa*, 142, 765
- Kuether, Carl A., and Smith, Arthur H. The absorption and fate of free citric acid in the rat, 137, 647
 —. See *Roe and Kuether*, 147, 399
- Kuhn, Richard. See *György, Kuhn, and Lederer*, 131, 745
- Kuiken, K. A. See *Schultze and Kuiken*, 137, 727
- Kuizenga, Marvin H., Wick, Arne N., Ingle, Dwight J., Nelson, John W., and Cartland, George F. The preparation and comparative physiological activities of beef, hog, and sheep adrenal cortex extracts, 147, 561
 — and Spaulding, L. Bayard. The preparation of the highly active barium salt of heparin and its fractionation into two chemically and biologically different constituents, 148, 641
- Kumler, W. D., and Halverstadt, I. F. The acid strength of bile acids, 137, 765
- Kuna, Martin. See *Levene and Kuna*, 127, 49
 —. See *Ovakimian, Christman, Kuna, and Levene*, 134, 151
 —. See *Ovakimian, Kuna, and Levene*, 135, 91
 —, Ovakimian, G., and Levene, P. A. The correlation of the configurations of α -aminophenylacetic acid and of alanine, 137, 337
 —. See *Levene and Kuna*, 140, 255, 259, 141, 391
- Kurnick, Nathaniel B. Permeability of the human erythrocyte to sodium and potassium, 140, 581
- Kurtz, Alton C., and Wilson, D. Wright. Saccharolactone as a reagent for precipitating certain amines, 129, 693
 —. A new method for isolating *l*(+)-lysine, 140, 705
- Kuyper, Adrian C. The rate of excretion of ingested acid and alkali, 145, 615
- Kyker, Granvil C., Webb, Bailey D., and Andrews, James C. The estimation of

- small amounts of quinine in blood and other biological materials, 139, 551
- L
- Lackman, David B.** See *Sevag, Smolens, and Lackman*, 134, 523
- Lampen, J. O.** See *Hottle, Lampen, and Pappenheimer*, 137, 457
- , **Underkoffler, L. A.**, and **Peterson, W. H.** *p*-Aminobenzoic acid, a growth factor for *Acetobacter suboxydans*, 146, 277
- Landau, R. L.** See *Welch and Landau*, 144, 581
- Landsteiner, K.**, and **Harte, R. A.** Group-specific substances in human saliva, 140, 673
- Landy, Maurice**, and **Dicken, Dorothy M.** A microbiological method for the determination of *p*-aminobenzoic acid, 146, 109
- Lanford, Caroline Sherman**, and **Sherman, H. C.** Further studies of the calcium content of the body as influenced by that of the food, 126, 381
- The effect of orange juice on calcium assimilation, 130, 87
- , **Campbell, H. L.**, and **Sherman, H. C.** Influence of different nutritional conditions upon the level of attainment in the normal increase of calcium in the growing body, 137, 627
- Lang, E. H.** See *Reiner and Lang*, 139, 641
- See *Reiner, Moore, Lang, and Green*, 146, 583
- Langley, Wilson D.** Urinary histidine. Determination of histidine in urine. Histidine in normal and in pregnancy urines, 137, 255
- Langstroth, G. O.**, and **Talbot, N. B.** The absorption spectra of the compounds formed by androsterone and testosterone in the *m*-dinitrobenzene reaction, 128, 759
- and — The behavior of dehydroisoandrosterone and androsterone in the *m*-dinitrobenzene reaction, 129, 759
- Langstroth, G. O.**—continued:
- , **Talbot, N. B.**, and **Fineman, A.** Spectrochemical assay of androsterone and dehydroisoandrosterone in simple solutions, 130, 585
- Lardy, Henry A.** See *Moxon, Schaefer, Lardy, DuBois, and Olson*, 132, 785
- and **Phillips, Paul H.** The effect of certain inhibitors and activators on sperm metabolism, 138, 195
- See *Boyer, Lardy, and Phillips*, 146, 673
- and **Phillips, Paul H.** Inhibition of sperm respiration and reversibility of the effects of metabolic inhibitors, 148, 333
- and — Inhibition of sperm glycolysis and reversibility of the effects of metabolic inhibitors, 148, 343
- and — The effect of thyroxine and dinitrophenol on sperm metabolism, 149, 177
- See *Boyer, Lardy, and Phillips*, 149, 529
- Larsen, Alma.** See *Stokes, Larsen, Woodward, and Foster*, 150, 17
- Larsen, Junius**, and **Poe, Charles F.** The solubility of pancreatic amylase in some organic solvents, 132, 129
- Larson, Hardy W.**, **Chambers, William H.**, **Blatherwick, N. R.**, **Ewing, Mary E.**, and **Sawyer, Susan D.** The metabolism of *d*- and *l*-xylulose in the depancreatized dog, 129, 701
- See *Blatherwick, Larson, and Sawyer*, 133, 643
- See *Blatherwick, Bradshaw, Ewing, Larson, and Sawyer*, 134, 549
- , **Blatherwick, N. R.**, **Bradshaw, Phoebe J.**, **Ewing, Mary E.**, and **Sawyer, Susan D.** The metabolism of *l*-xylose, 136, 1
- , —, —, and **Sawyer, Susan D.** The metabolism of *l*-xylulose, 138, 353
- Laskowski, Michael**, and **Fromageot, Claude.** Some properties of desulfurase, 140, 663
- Oxygen consumption during the histamine-histaminase reaction, 145, 457

- Lauffer, Max A.** The viscosity of tobacco mosaic virus protein solutions, 126, 443
- and **Price, W. C.** Thermal denaturation of tobacco mosaic virus, 133, 1
- and **Stanley, W. M.** Studies on the sedimentation rate of bushy stunt virus, 135, 463
- and **Dow, R. B.** The denaturation of tobacco mosaic virus at high pressures, 140, 509
- The homogeneity of bushy stunt virus protein as determined by the ultracentrifuge, 143, 99
- See *Knight and Lauffer*, 144, 411
- Lavietes, Paul H.** See *Rosenbaum and Lavietes*, 131, 663
- See *Riggs, Lavietes, and Man*, 143, 363
- Lavin, George I., Loring, Hubert S., and Stanley, W. M.** Ultraviolet absorption spectra of latent mosaic and ring spot viruses and of their nucleic acid and protein components, 130, 259
- See *Fruton and Lavin*, 130, 375
- See *White and Lavin*, 132, 717
- See *Craig, Jacobs, and Lavin*, 139, 277
- See *Jacobs, Craig, and Lavin*, 141, 51
- See *Goebel, Shedlorsky, Lavin, and Adams*, 148, 1
- Lawrence, John H.** See *Jones, Chaikoff, and Lawrence*, 128, 631
- 133, 319
- Leatham, James H.** See *Allison, Cole, Leatham, Nastuk, and Anderson*, 147, 255
- Leblond, Charles P.** See *Mann, Leblond, and Warren*, 142, 905
- Lechycka, Marie.** See *Clarke, Lechycka, and Light*, 142, 957
- Lederer, Edgar.** See *György, Kuhn, and Lederer*, 131, 745
- Lee, S. B.** See *Wilson, Lee, and Wyss*, 139, 91
- See *Wilson, Lee, and Wilson*, 144, 265
- , **Wilson, J. B., and Wilson, P. W.** Mechanism of biological nitrogen fixation. X. Hydrogenase in cell-free extracts and intact cells of *Azotobacter*, 144, 273
- Lee, William C.** See *Duffendack, Thomson, Lee, and Koppius*, 126, 1
- Lehninger, Albert L.** The acid-splitting reaction of acetoacetic acid and the enzymatic formation of acetic acid from acetoacetic acid, 143, 147
- The metabolism of acetopyruvic acid, 148, 393
- A note on the identity of a carbonyl compound isolated from beef liver, 149, 43
- Leibner, I. Wallace.** See *Kaye, Leibner, and Connor*, 132, 195
- See *Kaye, Leibner, and Sobel*, 138, 643
- Leloir, Luis F.** See *Muñoz and Leloir*, 147, 355
- Lemish, Sonia.** See *Hamilton and Van Slyke*, 150, 231
- Lennox, W. G.** See *Gibbs, Lennox, Nims, and Gibbs*, 144, 325
- See *Nims, Gibbs, and Lennox*, 145, 189
- Leonards, Jack R.** See *Free and Leonards*, 149, 203
- LePage, G. A.** See *Pett and LePage*, 132, 585
- and **Pett, L. B.** Absorption experiments with vitamin A, 141, 747
- and **Umbreit, W. W.** Phosphorylated carbohydrate esters in autotrophic bacteria, 147, 263
- and — The occurrence of adenosine-3-triphosphate in autotrophic bacteria, 148, 255
- Lepkovsky, Samuel, and Nielsen, Elmer.** A green pigment-producing compound in urine of pyridoxine-deficient rats, 144, 135
- , **Roboz, Elisabeth, and Haagen-Smit, A. J.** Xanthurenic acid and its rôle in the tryptophane metabolism of pyridoxine-deficient rats, 149, 195
- and **Parsons, Della.** The effect of pyridoxine deficiency in the rat upon the catalase activity of its tissues, 149, 281

- Leshin, Seymour.** See *Brodie, Brand, and Leshin*, 130, 555
- Lesuk, Alex.** See *Stodola, Lesuk, and Anderson*, 126, 505
- and **Anderson, R. J.** The chemistry of the lipids of tubercle bacilli. LXII. Studies on mycolic acid, 136, 603
- and —. Concerning the chemical composition of *Cysticercus fasciolaris*. II. The occurrence of a cerebroside containing dihydrosphingosine and of hydrolecithin in *Cysticercus* larvae, 139, 457
- Leva, Ernst, and Guest, George Martin.** A method for the determination of total base (sum of sodium, potassium, calcium, and magnesium) in blood, 130, 777
- A colorimetric micromethod for the determination of sodium with manganous uranyl acetate, 132, 487
- See *Rapoport, Leva, and Guest*, 139, 621, 633
- and **Rapoport, S.** A method for the determination of phytate phosphorus in blood, 141, 343
- and —. The determination of acid-soluble phosphoglycerol in liver, 149, 47
- See *Rapoport, Leva, and Guest*, 149, 57, 65
- Levene, P. A.** Structure of desoxyribonucleic acid. On the diphosphoric esters of pyrimidinedesoxyribosides, 126, 63
- See *Schmidt and Levene*, 126, 423
- and **Kuna, Martin.** Partially O-methylated hexitols. I. 1,2,3,5,6-O-Pentamethyl-d-sorbitol, 127, 49
- See *Tipson and Levene*, 127, 105
- and **Rothen, Alexandre.** Walden inversion. XXI. The halogenation of aromatic carbinols. Rotatory dispersion of aromatic carbinols and corresponding bromides, 127, 237
- See *Schmidt, Pickels, and Levene*, 127, 251
- See *Tipson, Christman, and Levene*, 128, 609
- See *Tipson and Levene*, 129, 575
- Levene, P. A.—continued:**
- See *Raymond, Tipson, and Levene*, 130, 47
- See *Tipson and Levene*, 130, 235
- Methylation of chondrosamine hydrochloride, 133, 767
- See *Ovakimian, Christman, Kuna, and Levene*, 134, 151
- See *Ovakimian, Kuna, and Levene*, 135, 91
- Methylation of hexosamines, 137, 29
- See *Kuna, Ovakimian, and Levene*, 137, 337
- and **Kuna, Martin.** Configurational relationship of 2-methylheptanoic and 4-methylnonanoic acids, 140, 255
- and —. Configurational relationships of aliphatic amines, 140, 259
- On chondrosin, 140, 267
- On the carbohydrate group of egg proteins. III, 140, 279
- and **Kuna, Martin.** Homologous series of α -substituted aliphatic acids, 141, 391
- Levi, J. Elliot.** See *Alexander and Levi*, 146, 399
- Levine, Harry, and Bodansky, Meyer.** Determination of paraldehyde in biological fluids, 133, 193
- Levitan, Nathan I.** See *Clark, Levitan, Gleason, and Greenberg*, 145, 85
- Levy, Edward D.** See *Sarett, Perlzweig, and Levy*, 135, 483
- See *Perlzweig, Levy, and Sarett*, 136, 729
- Levy, Milton, and Palmer, Albert H.** Iodometric estimation of small quantities of nitrogen without distillation, 136, 57
- See *Palmer and Levy*, 136, 407
- and **Palmer, Albert H.** Chemistry of the chick embryo. II. Weight, nitrogen, and dipeptidase accumulation, 136, 415
- See *Palmer and Levy*, 136, 629
- and **Palmer, Albert H.** The benzoylation and resolution of alanine, 146, 493

Levy, Milton—continued:

- and Palmer, Albert H. Chemistry of the chick embryo. IV. Aminopeptidase, 150, 271

Levy, Sylvia Ruth. See *Manly and Levy*, 139, 35

—. See *Haven and Levy*, 141, 417

—. See *Hunter and Levy*, 146, 577

Lew, W. See *Poo, Lew, and Addis*, 128, 69

Lewis, Howard B. See *Jen and Lewis*, 127, 97

—. See *Velick, White, and Lewis*, 127, 477

—. See *Abbott and Lewis*, 131, 479

—. See *Schultz and Lewis*, 133, 199

—. See *Abbott and Lewis*, 137, 535

—. See *Brown and Lewis*, 138, 705, 717

—. See *Blood and Lewis*, 139, 407, 413

—. See *Darby and Lewis*, 146, 225

Lewis, J. C. A *Lactobacillus* assay method for *p*-aminobenzoic acid, 146, 441

Lewis, Roger A. See *Engel, Thorn, and Lewis*, 137, 205

Li, Choh Hao, Simpson, Miriam E., and Evans, Herbert M. Action of ketene on gonadotropic hormones, 131, 259

—, Lyons, William R., and Evans, Herbert M. Studies on pituitary lactogenic hormone. IV. Tyrosine and tryptophane content, 136, 709

—, —, and —. V. Reactions with iodine, 139, 43

—, —, and —. VI. Molecular weight of the pure hormone, 140, 43

—, Simpson, Miriam E., and Evans, Herbert M. Studies on pituitary lactogenic hormone. VII. A method of isolation, 146, 627

—. Studies on pituitary lactogenic hormone. VIII. Diffusion and viscosity measurements, 146, 633

—. IX. The content of sulfur amino acid, 148, 289

—, Evans, Herbert M., and Simpson, Miriam E. Adrenocorticotrophic hormone, 149, 413

Liang, Chih-Chuan. See *Adolph and Liang*, 137, 517

146, 497

Libet, B. See *Elliott and Libet*, 136, 797

143, 227

—. See *Elliott, Scott, and Libet*, 146, 251

Lieben, Fritz, and Loo, Yen Chin. On the liberation of free amino nitrogen from proteins in the Van Slyke apparatus, 145, 223

Light, Amos E. See *Clarke, Lechycza, and Light*, 142, 957

— and Clarke, Miriam F. Studies relating to the use of *Lactobacillus casei* in microbiological assays, 147, 739

Lightbody, Howard D., and Kleinman, Abram. Variations produced by food differences in the concentration of arginase in the livers of white rats, 129, 71

Lilly, John C. See *Borsook, Dubnoff, Lilly, and Marriott*, 138, 405

Linderström-Lang, K., and Jacobsen, C. F. On the properties of 2-methylthiazoline and their relation to the protein problem, 137, 443

Lindner, Manfred. See *Pollack and Lindner*, 143, 655

147, 183

Lindstrom, Harold V., and Sandstrom, W. M. Sulfur in proteins. VI. Qualitative studies in the alkaline decomposition of cystine, 138, 445

Lineweaver, Hans. See *Balls and Lineweaver*, 130, 669

— and Hoover, Sam R. A comparison of the action of crystalline papain on native and urea-denatured proteins, 137, 325

Lingane, James J., and Davis, Orris L. Polarographic determination of riboflavin (vitamin B₂) and other vitamin B factors, 137, 567

Link, Karl Paul. See *Moore and Link*, 133, 293

—. See *Campbell, Roberts, Smith, and Link*, 136, 47

Link, Karl Paul—*continued*:

- See *Campbell, Smith, Roberts, and Link*, 138, 1
- See *Campbell and Link*, 138, 21
- See *Stahmann, Huebner, and Link*, 138, 513
- See *Huebner and Link*, 138, 529
- See *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 142, 941
- See *Lohmar, Dimler, Moore, and Link*, 143, 551
- See *Dimler and Link*, 143, 557
- See *Black, Overman, Elvehjem, and Link*, 145, 137
- See *Overman, Stahmann, and Link*, 145, 155
- See *Baumann, Field, Overman, and Link*, 146, 7
- *Overman, Ralph S., Sullivan, William R., Huebner, Charles Ferdinand, and Scheel, Lester D.* Studies on the hemorrhagic sweet clover disease. XI. Hypoprothrombinemia in the rat induced by salicylic acid, 147, 463
- See *Dimler and Link*, 150, 345
- See *Lohmar and Link*, 150, 351
- Lipmann, Fritz.** A phosphorylated oxidation product of pyruvic acid, 134, 463
- The oxidation of *p*-aminobenzoic acid catalyzed by peroxidase, and its inhibition by sulfanilamide, 139, 977
- *Hotchkiss, Rollin D., and Dubos, René J.* The occurrence of *d*-amino acids in gramicidin and tyrocidine, 141, 163
- Lipschitz, Werner L., and Bueding, Ernst.** Mechanism of the biological formation of conjugated glucuronic acids, 129, 333
- Lipton, M. A.** See *Sober, Lipton, and Elvehjem*, 134, 605
- See *Wagner, Azelrod, Lipton, and Elvehjem*, 136, 357
- and *Elvehjem, C. A.* The activation of cocarboxylase by thiamine, 136, 637
- See *Barron, Lyman, Lipton, and Goldinger*, 141, 957

Lipton, M. A.—*continued*:

- See *Barron, Goldinger, Lipton, and Lyman*, 141, 975
- See *Stare, Lipton, and Goldinger*, 141, 981
- Lischer, Carl F.** See *Martin and Lischer*, 137, 169
- Little, John E., and Caldwell, M. L.** A study of the action of pancreatic amylase, 142, 585
- and —. A study of the action of pancreatic amylase. II, 147, 229
- Little, Robert W., Thomas, A. W., and Sherman, H. C.** Spectrophotometric studies of the storage of vitamin A in the body, 148, 441
- Locke, Arthur.** See *Main and Locke*, 140, 909
- 143, 729
- Lockhart, E. E., and Potter, V. R.** Studies on the mechanism of hydrogen transport in animal tissues. II. Reactions involving cytochrome *c*, 137, 1
- Logan, Milan A., and Kane, Lewis W.** Solubility of bone salt. IV. Solubility of bone in biological fluids, 127, 705
- The early effects of parathyroid hormone on the blood and urine, 127, 711
- See *Boyd and Logan*, 146, 279
- Lohmar, Rolland, Dimler, Robert J., Moore, Stanford, and Link, Karl Paul.** Carbohydrate characterization. III. The identification of hexuronic or saccharic acids as benzimidazole derivatives, 143, 551
- and *Link, Karl Paul.* Note on the reaction of *d*-glucosamine with *o*-phenylenediamine, 150, 351
- Long, C. N. H.** See *Harrison and Long*, 133, 209
- See *White, Bonsnes, and Long*, 143, 447
- See *Sayers, White, and Long*, 149, 425
- Long, William P.** See *Gallagher and Long*, 147, 131

- Longenecker, Herbert E. Deposition and utilization of fatty acids. I. Fat synthesis from high carbohydrate and high protein diets in fasted rats, 128, 645
- II. The non-preferential utilization and slow replacement of depot fat consisting mainly of oleic and linoleic acids; and a fatty acid analysis of corn oil, 129, 13
- See *Musulin, Tully, Longenecker, and King*, 129, 437
- , *Musulin, R. R., Tully, R. H., 3rd, and King, C. G.* An acceleration of vitamin C synthesis and excretion by feeding known organic compounds to rats, 129, 445
- Deposition and utilization of fatty acids of low molecular weight; and a fatty acid analysis of coconut oil, 130, 167
- , *Gavin, Gertrude, and McHenry, E. W.* Fatty acids synthesized by the action of thiamine, 134, 693
- , *Fricke, H. H., and King, C. G.* The effect of organic compounds upon vitamin C synthesis in the rat, 135, 497
- , *Gavin, Gertrude, and McHenry, E. W.* The relation of the vitamin B complex and liver and pancreas extracts to fat synthesis, 139, 611
- See *Kelsey and Longenecker*, 139, 727
- Longworth, L. G.* See *Woolley and Longworth*, 142, 285
- Longwell, Bernard B., and Wintersteiner, O.* Estrogens with oxygen in Ring B. III. 6-Keto- α -estradiol, 133, 219
- and *McKee, Frances S.* The excretion of estrogens in the bile and urine after the administration of estrone, 142, 757
- Lonstein, Ida.* See *Goettsch, Lonstein, and Hutchinson*, 128, 9
- Loo, Yen Chin.* See *Lieben and Loo*, 145, 223
- Loomis, Ted A.* See *Hubbard and Loomis*, 145, 641
- Looney, Joseph M., and Walsh, Anna I.* The determination of spinal fluid protein with the photoelectric colorimeter, 127, 117
- See *Jellinek and Looney*, 128, 621
- and *Walsh, Anna I.* The determination of globulin and albumin in blood serum by the photoelectric colorimeter, 130, 635
- and *Romanoff, Elijah B.* The effect of testosterone on the serum lipids of normal subjects, 136, 479
- Lorenz, F. W.* See *Entenman, Lorenz, and Chaikoff*, 126, 133
- , *Chaikoff, I. L., and Entenman, C.* The endocrine control of lipid metabolism in the bird. II. The effects of estrin on the blood lipids of the immature domestic fowl, 126, 763
- See *Entenman, Lorenz, and Chaikoff*, 133, 231
- , 134, 495
- Loring, Hubert S.* Properties of the latent mosaic virus protein, 126, 455
- Properties and hydrolytic products of nucleic acid from tobacco mosaic virus, 130, 251
- See *Lavin, Loring, and Stanley*, 130, 259
- and *Pierce, John G.* The isolation by differential ultracentrifugation, identification, and properties of glycogen from *Macrosiphum pisi* and *Aphis brassicae*, 148, 35
- and *Carpenter, F. H.* The isolation of mononucleotides after hydrolysis of ribonucleic acid by crystalline ribonuclease, 150, 381
- Lough, S. Allan, Perilstein, Warren L., Heinen, Harold J., and Carter, Lawrence W.* Cystinuria. The metabolism of cystine, cysteine, methionine, homocystine, and S-carboxymethylcysteine, 139, 487
- Lowe, Charles.* See *Westerfeld and Lowe*, 145, 463
- Lowry, Oliver H.* See *Talbot, Lowry, and Astwood*, 132, 1
- , *Gilligan, D. Rourke, and Katersky, Evelyn M.* The determination of collagen and elastin in tissues, with

Lowry, Oliver H.—*continued*:

- results obtained in various normal tissues from different species, 139, 795
- , A quartz fiber balance, 140, 183
- and Hastings, A. Baird. Histochemical changes associated with aging. I. Methods and calculations, 143, 257
- , —, Hull, Tatiana Z., and Brown, Andrea N. Histochemical changes associated with aging. II. Skeletal and cardiac muscle in the rat, 143, 271
- , McCay, C. M., Hastings, A. Baird, and Brown, Andrea N. Histochemical changes associated with aging. III. The effects of retardation of growth on skeletal muscle, 143, 281
- , See *Wallace and Lowry*, 144, 651
- , Smith, Clement A., and Cohen, Dorothy L. A microcolorimetric method for measuring the oxygen saturation of blood, 146, 519
- Lozinski, Ezra, and Gottlieb, Rudolph. A substitute for bile salts for administration with substances possessing vitamin K activity, 133, 635
- Luck, James Murray. See *Thomas, Ingalls, and Luck*, 129, 263
- , Eudin, John, and Nimmo, Charles C. Autolytic changes in the protein and amino acid content of liver, 131, 201
- , See *Ballou and Luck*, 135, 111
- , 139, 233
- Luckey, Freeman. See *Robinson, Stewart, and Luckey*, 137, 233
- Luckey, Hugh. See *Robinson, Luckey, and Mills*, 147, 175
- Luckey, T. D. See *Briggs, Luckey, Elvehjem, and Hart*, 148, 163
- , See *Briggs, Luckey, Tepley, Elvehjem, and Hart*, 148, 517
- , See *Briggs, Luckey, Elvehjem, and Hart*, 150, 11
- Ludewig, Stephan. See *Chanutin and Ludewig*, 131, 519
- , See *Chanutin, Ludewig, and Masket*, 143, 737

Ludewig, Stephan—*continued*:

- , Chanutin, Alfred, and Masket, A. V. Studies on the calcium-protein relationship with the aid of the ultracentrifuge. II. Observations on serum, 143, 753
- , See *Masket, Chanutin, and Ludewig*, 143, 763
- Lukens, Francis D. W. See *Stadie, Lukens, and Zapp*, 132, 393
- , See *Stadie, Zapp, and Lukens*, 132, 411, 423
- , 137, 63, 75
- Lundberg, W. O. See *Barnes, Lundberg, Hanson, and Burr*, 149, 313
- Lundgren, Harold P. The catalytic effect of active crystalline papain on the denaturation of thyroglobulin, 138, 293
- , Gurin, Samuel, Bachman, Carl, and Wilson, D. Wright. The gonadotropic hormone of urine of pregnancy. IV, 142, 367
- , Elam, Daniel W., and O'Connell, Richard A. Electrophoretic study of the action of alkylbenzenesulfonate detergents on egg albumin, 149, 183
- Lyman, Carl M. See *Barron and Lyman*, 127, 143
- and Barron, E. S. Guzman. Studies on biological oxidations. XII. Oxidations and carbohydrate synthesis in nephritic kidney slices, 132, 293
- , See *Barron, Dick, and Lyman*, 137, 267
- , See *Barron and Lyman*, 141, 951
- , See *Barron, Lyman, Lipton, and Goldinger*, 141, 957
- , See *Barron, Goldinger, Lipton, and Lyman*, 141, 975
- Lynch, Elsa R. See *Brown and Kolmer*, 137, 525
- Lynn, John. See *Moore and Lynn*, 141, 819
- Lyons, William R. See *Li, Lyons, and Evans*, 136, 709
- , 139, 43
- , 140, 43
- Lyttle, John D. See *Goettsch, Lyttle, Grim, and Dunbar*, 144, 121

M

- Ma, T. S.** See *Horecker, Ma, and Haas*, 136, 775
- Maass, A. R.** See *Spector, Maass, Michaud, Elvehjem, and Hart*, 150, 75
- MacCorquodale, D. W.** See *Westerfeld, Thayer, MacCorquodale, and Doisy*, 126, 181
- See *Westerfeld, MacCorquodale, Thayer, and Doisy*, 126, 195
- See *Binkley, MacCorquodale, Thayer, and Doisy*, 130, 219
- See *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 130, 431
- , **McKee, R. W., Binkley, S. B., Cheney, L. C., Holcomb, W. F., Thayer, Sidney A., and Doisy, Edward A.** Identification of vitamin K₁ (alfalfa), 130, 433
- See *McKee, Binkley, Thayer, MacCorquodale, and Doisy*, 131, 327
- , **Cheney, L. C., Binkley, S. B., Holcomb, W. F., McKee, R. W., Thayer, Sidney A., and Doisy, Edward A.** The constitution and synthesis of vitamin K₁, 131, 357
- See *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 134, 591
- MacFadyen, Douglas A.** See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 133, 287
- See *Van Slyke, Dillon, MacFadyen, and Hamilton*, 141, 627
- See *Van Slyke, MacFadyen, and Hamilton*, 141, 671
- See *Van Slyke, Hiller, and MacFadyen*, 141, 681
- Determination of amino acids in plasma by the ninhydrin-carbon dioxide reaction without removal of proteins, 145, 387
- and **Van Slyke, Donald D.** Note on the use of the *o*-phenanthroline ferrous complex as an indicator in the ceric sulfate titration of blood sugar, 149, 527
- See *Van Slyke, MacFadyen, and Hamilton*, 150, 251
- MacKay, Eaton M., Wick, Arne N., and Carne, Herbert O.** Relative amount of hepatic glycogen deposited by glucose, glycine, and *dl*-alanine, 132, 613
- , **Carne, Herbert O., and Wick, Arne N.** Antiketogenic and glycogenic activity of citric acid, 133, 59
- , **Barnes, Richard H., Carne, Herbert O., and Wick, Arne N.** Ketogenic activity of acetic acid, 135, 157
- , **Wick, Arne N., and Barnum, Cyrus P.** Ketogenic action of short chain, even numbered carbon fatty acids in carbohydrate-fed animals, 135, 183
- See *Wick, MacKay, Carne, and Mayfield*, 136, 237
- , **Wick, Arne N., and Barnum, Cyrus P.** Ketogenic action of odd numbered carbon fatty acids, 136, 503
- , —, and —. Hepatic glycogen formation by the isomers of alanine, 137, 183
- , —, **Carne, Herbert O., and Barnum, Cyrus P.** The influence of alkalosis and acidosis upon fasting ketosis, 138, 63
- , **Carne, Herbert O., Wick, Arne N., and Visscher, Frank E.** The relation of fasting ketosis in the rat to the preceding diet and the liver fat, 141, 889
- Mackinney, G.** Criteria for purity of chlorophyll preparations, 132, 91
- See *Weast and Mackinney*, 133, 551
- Absorption of light by chlorophyll solutions, 140, 315
- See *Almquist, Mackinney, and Mecchi*, 150, 99
- MacLachlan, E. A.** See *Talbot, Butler, and MacLachlan*, 132, 595
- See *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 134, 319
- See *Talbot, Butler, MacLachlan, and Jones*, 136, 365
- See *Talbot, Wolfe, MacLachlan, and Berman*, 139, 521
- See *Talbot, Berman, and MacLachlan*, 143, 211
- See *Butler, Cushman, and MacLachlan*, 150, 453

- MacLachlan, P. L., and Hodge, Harold Carpenter.** The influence of cocaine feeding on the liver lipids of the white mouse, 127, 721
- The effects on blood lipids of short exposure to low atmospheric pressure, 129, 465
- , **Hodge, Harold Carpenter, and Whitehead, Raymond.** The lipids of the adrenal gland in normal and fasting rabbits, 139, 185
- See *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 139, 897
- See *Rafferty and MacLachlan*, 140, 167
- , **Hodge, Harold Carpenter, Bloor, W. R., Welch, Eileen A., Truax, Frederick L., and Taylor, J. D.** Lipids of the fasting mouse. II. The fat to water relation in the liver and the fractionation of the liver phospholipids, 143, 473
- Fat metabolism in the lungs, 146, 45
- MacVicar, Robert, and Heller, V. G.** Blood chloride and phosphorus content as affected by adrenalin injection, 137, 643
- Macy, Icie G.** See *Beach, Erickson, Bernstein, Williams, and Macy*, 128, 339
- See *Beach, Bernstein, Hummel, Williams, and Macy*, 130, 115
- See *Stern, Beach, and Macy*, 130, 733
- See *Beach, Bernstein, Hoffman, Teague, and Macy*, 139, 57
- Madden, Robert J.** See *Axelrod, Madden, and Elvehjem*, 131, 85
- Maier, John.** See *Cleary, Maier, and Hitchings*, 127, 403
- Main, Edna R., and Shinn, Lawrence E.** The determination of hydrogen peroxide in bacterial cultures, 128, 417
- and **Locke, Arthur.** Carbonic anhydrase. I. Factors affecting activity, 140, 909
- and —. II. Zinc in its relation to carbonic anhydrase activation and inactivation, 143, 729
- Malam, Muriel.** See *Barker, Shorr, and Malam*, 129, 33
- Malloy, Helga Tait.** See *Evelyn, Malloy, and Rosen*, 126, 645
- See *Evelyn and Malloy*, 126, 655
- Man, Evelyn B.** See *Riggs and Man*, 134, 193
- See *Riggs, Laviates, and Man*, 143, 363
- Manchester, T. C.** Note on the acceleration and retardation of invertase activity, 130, 439
- Manery, Jeanne F., and Hastings, A. Baird.** The distribution of electrolytes in mammalian tissues, 127, 657
- Mangun, George H.** See *Myers and Mangun*, 132, 701
- See *Muntwyler, Mellors, Mautz, and Mangun*, 134, 367, 389
- See *Corsaro, Mangun, and Myers*, 135, 407
- and **Myers, Victor C.** Normal creatine, phosphorus, and potassium content of human cardiac and voluntary muscle, 135, 411
- Manley, Ralph H., and Evans, Cyril D.** The critical peptization temperatures of zein in concentrated ethyl alcohol, 143, 701
- Manly, Marian LeFevre, and Bale, William F.** The metabolism of inorganic phosphorus of rat bones and teeth as indicated by the radioactive isotope, 129, 125
- See *Manly, Hodge, and Manly*, 134, 293
- and **Levy, Sylvia Ruth.** Effect of pregnancy on the phosphorus turnover of the skeleton of rats maintained on normal and rachitogenic diets, 139, 35
- Manly, Richard S., Hodge, Harold Carpenter, and Manly, Marian LeFevre.** The relation of the phosphorus turnover of the blood to the mineral metabolism of the calcified tissues as shown by radioactive phosphorus, 134, 293

- Mann, Frank C. See *Kendall, Flock, Bollman, and Mann*, 126, 697
- Mann, Walter, Leblond, Charles P., and Warren, Stafford L. Iodine metabolism of the thyroid gland, 142, 905
- Manning, P. D. V. See *Stokstad, Manning, and Rogers*, 132, 463
- See *Almquist, Stokstad, Mecchi, and Manning*, 134, 213
- See *Almquist, Mecchi, Stokstad, and Manning*, 134, 465
- See *Stokstad, Almquist, Mecchi, Manning, and Rogers*, 137, 373
- Manning, Winston M. See *Strain and Manning*, 144, 625
- See *Strain, Manning, and Hardin*, 146, 275
- See *Strain, Manning, and Hardin*, 148, 655
- Marble, Alexander, Graffin, Allan L., and Smith, Rachel M. Glycogen, fat, and water content of guinea pig liver, 134, 253
- Marenzi, A. D., and Cardini, C. E. The colorimetric determination of choline, 147, 363
- and —. On the determination of the phospholipids in blood, 147, 371
- Marker, R. E., and Hartman, Carl G. Assays of urine from rhesus monkeys for pregnanediol and other steroids, 133, 529
- Marrian, Guy Frederic. See *Schachter and Marrian*, 126, 663
- See *Anderson and Marrian*, 127, 649
- Marriott, William. See *Borsook, Dubnoff, Lilly, and Marriott*, 138, 405
- Marsh, Gordon, and Carlson, Loren. An injection manometer assembly for the study of reactions at steady state, 136, 69
- Marshall, E. K., Jr. See *Bratton and Marshall*, 128, 537
- Martin, Beverly B. See *Stokes and Martin*, 147, 483
- Martin, Gustav J., and Lischer, Carl F. Polyhydroxyanthraquinones affecting coagulation time in vitamin K deficiency, 137, 169
- Martin, Gustav J.—continued:
- and Ansbacher, S. Confirmatory evidence of the chromatrichial activity of *p*-aminobenzoic acid, 138, 441
- , Rennebaum, E. H., and Thompson, Marvin R. Inhibition of the conjugation of sulfanilamide, 139, 871
- and Fisher, C. Virginia. Antisulfonamide action of adenine, 6-aminopurine, 144, 289
- Martin, L. F., Balls, A. K., and McKinney, H. H. Protein changes in mosaic-diseased tobacco, 130, 687
- Martinek, Robert G., Kirch, Ernst R., and Webster, George L. Determination of nicotinic acid, 149, 245
- Marx, Walter, Simpson, Miriam E., and Evans, Herbert M. Purification of the growth hormone of the anterior pituitary, 147, 77
- Masen, John M. See *Gentzkow*, 143, 531
- The quantitative determination of atabrine in blood and urine, 148, 529
- Masket, A. V. See *Chanutin, Ludewig, and Masket*, 143, 737
- See *Ludewig, Chanutin, and Masket*, 143, 753
- , Chanutin, Alfred, and Ludewig, Stephan. Studies on the calcium-protein relationship with the aid of the ultracentrifuge. III. Influence of augmentation of serum with calcium and phosphate salts, 143, 763
- Mason, Harold L. See *Roepke and Mason*, 133, 103
- and Williams, Ray D. The effect of ingestion of nicotinic acid on the determination of thiamine in urine by the thiochrome method, 140, 417
- and —. Determination of thiamine in urine by the thiochrome method: estimation of the blank, 146, 589
- Massengale, O. N. See *Bills, Massengale, Hickman, and Gray*, 126, 241
- Mather, Alan. Distributions of estrogens between immiscible solvents, 144, 617
- Matlack, M. B., and Tucker, I. W. An esterase from muscular tissue, 132, 663

- Matthews, Jason E., Jr., Dow, R. B., and Anderson, Arthur K. The effects of high pressure on the activity of pepsin and rennin, 135, 697
- Mattill, H. A. See *Harris and Mattill*, 132, 477
- See *Golumbic and Mattill*, 134, 535
- 135, 339
- See *Devlin and Mattill*, 146, 123
- See *Houchin and Mattill*, 146, 301, 309
- See *Hines and Mattill*, 149, 549
- Maughan, G. B., Evelyn, Kenneth A., and Browne, J. S. L. A method for the quantitative estimation of glucuronic acid and conjugated glucuronides, 126, 567
- Mautz, Frederick R. See *Muntwyler, Mellors, and Mautz*, 134, 345
- See *Muntwyler, Mellors, Mautz, and Mangun*, 134, 367, 389
- See *Mellors, Muntwyler, and Mautz*, 144, 773
- See *Mellors, Muntwyler, Mautz, and Abbott*, 144, 785
- Maver, Mary E. The separation of cathepsin from malignant and normal rat tissue, 131, 127
- May, Everette L. See *Weinstock, May, Arnold, and Price*, 135, 343
- Mayer, Dennis T., and Gulick, Addison. The nature of the proteins of cellular nuclei, 146, 433
- Mayer, Gerda Gernsheim, and Sobotka, Harry. Photoelectric determination of *dl*- α -tocopherol in serum, 143, 695
- Mayer, Manfred, and Heidelberger, Michael. Velocity of combination of antibody with specific polysaccharides of pneumococcus, 143, 567
- Mayfield, Harry M. See *Wick, MacKay, Carne, and Mayfield*, 136, 237
- Maynard, L. A. See *Voris, Ellis, and Maynard*, 133, 491
- Mazur, Abraham. See *Clarke and Mazur*, 141, 283
- and Clarke, H. T. Chemical components of some autotrophic organisms, 143, 39
- and Shorr, Ephraim. The isolation of stilbestrol monoglycuronide from the urine of rabbits, 144, 283
- McBride, J. J., Guest, M. Mason, and Scott, E. L. The storage of the major liver components; emphasizing the relationship of glycogen to water in the liver and the hydration of glycogen, 139, 943
- Liver glycogenesis and fasting in the rat. The effect of glucose feeding on the water balance, 147, 333
- McCarthy, Earl F., and Van Slyke, Donald D. Diurnal variations of hemoglobin in the blood of normal men, 128, 567
- McCarthy, James F. See *Green, McCarthy, and King*, 128, 447
- , Green, Lowell F., and King, C. G. The substrate specificity and inhibition characteristics of two copper-protein "oxidases," 128, 455
- McCarthy, Timothy E., and Sullivan, M. X. A new and highly specific colorimetric test for methionine, 141, 871
- McCay, C. M. See *Lowry, McCay, Hastings, and Brown*, 143, 281
- McCollum, E. V. See *Prebluda and McCollum*, 127, 495
- See *Day and McCollum*, 130, 269
- See *Orent-Keiles and McCollum*, 133, 75
- See *Shils, Day, and McCollum*, 139, 145
- See *Orent-Keiles and McCollum*, 140, 337
- McConnell, Kenneth P. Distribution and excretion studies in the rat after a single subtoxic subcutaneous injection of sodium selenate containing radio-selenium, 141, 427
- Respiratory excretion of selenium studied with the radioactive isotope, 145, 55
- McCready, R. M. See *Hassid, Cori, and McCready*, 148, 89
- See *Hassid, Baker, and McCready*, 149, 303

- McCullagh, D. Roy, and Osborn, W. O. The male sex hormones of human urine and blood, 126, 299
- McCune, D. J. See *Ranney and McCune*, 150, 311
- McDaniel, L. E. See *Woolley, McDaniel, and Peterson*, 131, 381
- McElroy, L. W., and Goss, Harold. Report on four members of the vitamin B complex synthesized in the rumen of the sheep, 130, 437
- McFarlane, W. D. See *Shaw and McFarlane*, 132, 387
- McGee, Lemuel C., and Hastings, A. Baird. The carbon dioxide tension and acid-base balance of jejunal secretions in man, 142, 893
- McGinnis, James, Norris, L. C., and Heuser, G. F. An unidentified nutritional factor required by the chick for feather pigmentation, 145, 341
- McGinty, Daniel A. See *Seegers and McGinty*, 146, 511
- McGuire, Grace. See *Truhlar, Dreker, McGuire, and Falk*, 127, 345
- McHenry, E. W., and Gavin, Gertrude. The B vitamins and fat metabolism. II. The effect of thiamine upon the synthesis of body fat in pigeons, 128, 45
- See *Gavin and McHenry*, 132, 41
- and Gavin, Gertrude. The effects of liver and pancreas extracts upon fat synthesis and metabolism, 134, 683
- See *Longenecker, Gavin, and McHenry*, 134, 693
- and Gavin, Gertrude. The B vitamins and fat metabolism. IV. The synthesis of fat from protein, 138, 471
- See *Gavin and McHenry*, 139, 485
- See *Longenecker, Gavin, and McHenry*, 139, 611
- See *Gavin and McHenry*, 141, 619
- See *Patterson and McHenry*, 145, 207
- See *Gavin, Patterson, and McHenry*, 148, 275
- McIntire, Floyd C., Peterson, W. H., and Riker, A. J. A polysaccharide produced by the crown-gall organism, 143, 491
- McJunkin, F. A. See *Tweedy, Templeton, Patras, McJunkin, and McNamara*, 128, 407
- McKay, A. F. See *Heard and McKay*, 131, 371
- McKee, Frances S. See *Longwell and McKee*, 142, 757
- McKee, R. W. See *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 130, 433
- , Binkley, S. B., Thayer, Sidney A., MacCorquodale, D. W., and Doisy, Edward A. The isolation of vitamin K₂, 131, 327
- See *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 131, 357
- See *Binkley, McKee, Thayer, and Doisy*, 133, 721
- McKibbin, J. M., Schaefer, A. E., Frost, D. V., and Elvehjem, C. A. Studies on anemia in dogs due to pyridoxine deficiency, 142, 77
- See *Schaefer, McKibbin, and Elvehjem*, 143, 321
- , Schaefer, A. E., Elvehjem, C. A., and Hart, E. B. Studies on hemorrhagic anemia in dogs, 145, 107
- McKinney, H. H. See *Martin, Balls, and McKinney*, 130, 687
- McKinney, Margaret G. See *Bodansky, Duff, and McKinney*, 140, 365
- McLaren, A. D. See *Uber and McLaren*, 141, 231
- McLean, Franklin C. See *Eichelberger and McLean*, 142, 467
- McNamara, E. W. See *Tweedy, Templeton, Patras, McJunkin, and McNamara*, 128, 407
- McNeil, Edna W. See *Fox, McNeil, and Field*, 147, 645
- McShan, W. H., and Meyer, Roland K. The effect of trypsin and ptyalin preparations on the gonadotropic activity of pituitary extracts, 126, 361
- and —. The relation of the follicle-stimulating activity of fresh pituitary tissue to the action of the enzymes contained in the tissue, 132, 783

McShan, W. H.—continued:

- and Meyer, Roland K. The preparation and properties of pituitary follicle-stimulating fractions made by trypsin digestion, 135, 473

Mecchi, E. See *Almquist and Mecchi*, 126, 407

- See *Almquist, Stokstad, Mecchi, and Manning*, 134, 213

- See *Almquist, Mecchi, Stokstad, and Manning*, 134, 465

- See *Almquist and Mecchi*, 135, 355

- See *Stokstad, Almquist, Mecchi, Manning, and Rogers*, 137, 373

- See *Almquist, Mecchi, and Kratzer*, 141, 365

- See *Almquist, Kratzer, and Mecchi*, 148, 17

- See *Almquist, Mackinney, and Mecchi*, 150, 99

Meek, W. J. See *Jacobi, Baumann, and Meek*, 138, 571

Mehl, John W. See *Edsall and Mehl*, 133, 409

Meiklejohn, Arnold P. See *Egaña and Meiklejohn*, 141, 859

Mellors, Robert C. See *Muntwyler, Mellors, and Mautz*, 134, 345

- See *Muntwyler, Mellors, Mautz, and Mangun*, 134, 367, 389

- , *Muntwyler, Edward, and Mautz, Frederick R.* Electrolyte and water exchange between skeletal muscle and plasma in the dog following acute and prolonged extracellular electrolyte loss, 144, 773

- , —, —, and *Abbott, William E.* Changes of the plasma volume and "available (thiocyanate) fluid" in experimental dehydration, 144, 785

Melnick, Daniel, and Field, Henry, Jr. Chemical determination of vitamin B₁. I. Reaction between thiamine in pure aqueous solution and diazotized *p*-aminoacetophenone, 127, 505

- and —. II. Method for estimation of the thiamine content of biological materials with the diazotized *p*-aminoacetophenone reagent, 127, 515

Melnick, Daniel—continued:

- and *Field, Henry, Jr.* III. Quantitative enzymic conversion of cocarboxylase (thiamine pyrophosphate) to the free vitamin, 127, 531

- and —. Chemical determination, stability, and form of thiamine in urine, 130, 97

- and —. Determination of nicotinic acid in biological materials by means of photoelectric colorimetry, 134, 1

- and —. Chemical determination of nicotinic acid: inhibitory effect of cyanogen bromide upon the aniline side reactions, 135, 53

- , *Robinson, William D., and Field, Henry, Jr.* Influence of the excretion of other pyridine compounds upon the interpretation of the urinary nicotinic acid values, 136, 131

- , —, and —. Urinary excretion of nicotinic acid and its derivatives by normal individuals, 136, 145

- , —, and —. Factors affecting the concentration and distribution of nicotinic acid in the blood, 136, 157

- , —, and —. Fate of thiamine in the digestive secretions, 138, 49

- See *Hochberg, Melnick, Siegel, and Oser*, 148, 253

- See *Siegel, Melnick, and Oser*, 149, 361

Melnick, Joseph L. See *Stern and Melnick*, 131, 597

- Ultraviolet absorption spectra of cocarboxylase, thiamine, and their reduction products, 131, 615

- See *Stern and Melnick*, 135, 365

- The photochemical absorption spectra of the Pasteur enzyme and the respiratory ferment in yeast, 141, 269

- The photochemical spectrum of cytochrome oxidase, 146, 385

Melville, Donald B. See *Carter, Handler, and Melville*, 129, 359

- See *Carter and Melville*, 133, 109

- See *du Vigneaud, Hofmann, Melville, and György*, 140, 643

Melville, Donald B.—continued:

- See *du Vigneaud, Hofmann, Melville, and Rachele*, 140, 763
- See *Hofmann, Melville, and du Vigneaud*, 141, 207
- , *Hofmann, Klaus, Hague, Eleanor, and du Vigneaud, Vincent*. The isolation of biotin from milk, 142, 615
- See *Hofmann, Melville, and du Vigneaud*, 144, 513
- , *Hofmann, Klaus, and du Vigneaud, Vincent*. The hydrolysis of biotin sulfone, 145, 101
- See *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 145, 503
- See *du Vigneaud, Melville, Folkers, Wolf, Mazingo, Keresztesy, and Harris*, 146, 475
- , *Moyer, A. W., Hofmann, Klaus, and du Vigneaud, Vincent*. The structure of biotin: the formation of thio-penevaleric acid from biotin, 146, 487

Melzer, Francisca. See *Koenig, Melzer, Szego, and Samuels*, 141, 487

Member, Samuel. See *Bruger and Member*, 148, 77

Mendive, J. R. See *Scott and Mendive*, 139, 661
140, 445

Menzel, Arthur E. O., and Heidelberger, Michael. Specific and non-specific cell polysaccharides of a bovine strain of tubercle bacillus, 127, 221

Merker, Harvey. See *Irvin, Merker, Anderson, and Johnston*, 131, 439

Merrell, Margaret. See *Flexner, Gellhorn, and Merrell*, 144, 35

Metzger, Nannette. See *Baumann and Metzger*, 127, 111

Meyer, Curtis E. See *Smith and Meyer*, 131, 45

— and *Smith, Arthur H.* The influence of the type of carbohydrate ingested upon citric acid production, 134, 739
— See *Smith and Meyer*, 139, 227

Meyer, Karl, Smyth, Elizabeth M., and Dawson, Martin H. The isolation of a mucopolysaccharide from synovial fluid, 128, 319

— and *Chaffee, Eleanor*. Hyaluronic

Meyer, Karl—continued:

acid in the pleural fluid associated with a malignant tumor involving the pleura and peritoneum, 133, 83

— and *Smyth, Elizabeth M.* The mucopolysaccharides of skin, 138, 491

Meyer, Roland K. See *McShan and Meyer*, 126, 361

132, 783
135, 473

Meyerhof, Bettina. See *Ball and Meyerhof*, 134, 483

Meyerhof, Otto, and Junowicz-Kocholaty R. The two-fold activation of carbohydrate breakdown by arsenate and the dephosphorylation of phosphopyruvic acid, 145, 443

— and —. The equilibria of isomerase and aldolase, and the problem of the phosphorylation of glyceraldehyde phosphate, 149, 71

— See *Baer and Fischer*, 150, 213

Michaelis, Leonor. See *Granick and Michaelis*, 147, 91

—, *Coryell, Charles D., and Granick, S.* Ferritin. III. The magnetic properties of ferritin and some other colloidal ferric compounds, 148, 463

— See *Hahn, Granick, Bale, and Michaelis*, 150, 407

Michaud, L. See *Spector, Maass, Michaud, Elvehjem, and Hart*, 150, 75

Michel, Harry O. See *Bernheim, Bernheim, and Michel*, 126, 273

— A study of sulphemoglobin, 126, 323

Mickelsen, Olaf, and Keys, Ancel. The composition of sweat, with special reference to the vitamins, 149, 479

Mider, G. Burroughs. See *Greenstein, Jenrette, Mider, and White*, 137, 795

Militzer, Walter E. See *Breuer and Militzer*, 126, 561

Miller, A. T., Jr. Studies on tissue water. I. The determination of blood water by the distillation method, 143, 65

— II. A macro modification of the distillation method for the determination of tissue water, 149, 153

- Miller, Albert J. See *Deuel, Halliday, Hallman, Johnston, and Miller*, 139, 479
- Miller, Benjamin F., and Muntz, John A. A method for the estimation of ultra-microquantities of lactic acid, 126, 413
- See *Alving, Rubin, and Miller*, 127, 609
- , Allison, M. J. Carl, and Baker, Zelma. Studies on the metabolism of creatine and creatinine. I. Specific enzymatic methods for the analysis of creatine and creatinine in tissues, 130, 383
- See *Baker and Miller*, 130, 393, 132, 233
- Miller, Edgar G., Jr. See *Ross, Moore, and Miller*, 144, 667
- Miller, Elmer S. See *Norris, Rusoff, Miller, and Burr*, 139, 199
- See *Barnes, Miller, and Burr*, 140, 233, 241, 247, 773
- See *Norris, Rusoff, Miller, and Burr*, 147, 273
- Miller, F. R. See *Turner and Miller*, 147, 573
- Miller, Gail Lorenz. See *du Vigneaud, Miller, and Rodden*, 131, 631
- , Behrens, Otto K., and du Vigneaud, Vincent. A synthesis of the aspartic acid analogue of glutathione (asparthione), 140, 411
- and Stanley, W. M. Derivatives of tobacco mosaic virus. I. Acetyl and phenylureido virus, 141, 905
- and Andersson, Kjell J. I. The molecular weight of insulin, 144, 459
- and —. An ultracentrifuge study of reduced insulin, 144, 465
- and —. Ultracentrifuge and diffusion studies on native and reduced insulin in Duponol solution, 144, 475
- and Stanley, W. M. Derivatives of tobacco mosaic virus. II. Carbo-benzoy, *p*-chlorobenzoyl, and benzenesulfonyl virus, 146, 331
- Derivatives of tobacco mosaic virus. III. The rôle of denaturation of the virus in the measurement of phenolic groups, 146, 339
- Miller, Gail Lorenz—continued:
- IV. A study of the determination of phenol groups in virus derivatives by means of model experiments with derivatives of tyrosine, 146, 345
- Miller, Herbert C. The extrarenal regulation of muscle and serum potassium following extracellular fluid and sodium depletion, 147, 121
- Miller, Herbert K. See *Waelsh and Miller*, 145, 1
- Miller, Leon L. Anaphylactic shock and nitrogen metabolism in the dog, 133, 93
- and Hahn, P. F. The appearance of radioactive iron as hemoglobin in the red cell. The significance of "easily split" iron, 134, 585
- Miller, Pauline A. See *Mueller and Miller*, 140, 933
- Mills, Hugh. See *Robinson, Luckey, and Mills*, 147, 175
- Mills, R. C. See *Hegsted, Mills, Elvehjem, and Hart*, 138, 459
- See *Briggs, Mills, Elvehjem, and Hart*, 144, 47
- Minor, George R. See *Chanutin and Ludewig*, 131, 519
- Mirsky, I. Arthur, Nelson, Norton, and Grayman, Isabelle. The utilization of acetone bodies. I. The influence of feeding and of glucose in nephrectomized female rats, 130, 179
- See *Grayman, Nelson, and Mirsky*, 131, 121
- See *Nelson, Grayman, and Mirsky*, 132, 711, 140, 361
- See *Nelson, Rapoport, Guest, and Mirsky*, 144, 291
- Mitchell, Herschel K., Isbell, Edith R., and Thompson, Roy C. Microbiological assays for *p*-aminobenzoic acid, 147, 485
- See *Thompson, Isbell, and Mitchell*, 148, 281
- Modic, J. L. See *Heymann and Modic*, 131, 297

- Mohammad, Ali, Emerson, Oliver H., Emerson, Gladys A., and Evans, Herbert M. Properties of the filtrate factor of the vitamin B₂ complex, with evidence for its multiple nature, 133, 17
- Montgomery, M. Laurence, Entenman, C., and Chaikoff, I. L. The liver lipids of dogs subjected to ligation of the external pancreatic ducts, 128, 387
- See Entenman, Chaikoff, and Montgomery, 130, 121
- See Entenman, Montgomery, and Chaikoff, 135, 329
- , Entenman, C., Chaikoff, I. L., and Nelson, C. The rôle of the external secretion of the pancreas in lipid metabolism. The prevention of fatty livers in depancreatized and duct-ligated dogs by the daily feeding of fresh pancreatic juice, 137, 693
- See Entenman, Chaikoff, and Montgomery, 137, 699
- See Sheline, Chaikoff, Jones, and Montgomery, 147, 409
- , 149, 139
- See Fishler, Entenman, Montgomery, and Chaikoff, 150, 47
- Moore, Barbara. See Strong, Feeney, Moore, and Parsons, 137, 363
- Moore, Dan H. See Chargaff, Ziff, and Moore, 139, 383
- and Lynn, John. Electrophoretic measurements on normal human plasma, 141, 819
- See Glick, Glaubach, and Moore, 144, 525
- See Abramson and Moore, 144, 579
- See Ross, Moore, and Miller, 144, 667
- See Chargaff, Moore, and Bendich, 145, 593
- See Reiner, Moore, Lang, and Green, 146, 583
- Moore, P. R. See Baumann, Foster, and Moore, 142, 597
- Moore, Stanford, and Link, Karl Paul. Carbohydrate characterization. I. The oxidation of aldoses by hypiodite in methanol. II. The identification of seven aldo-monosaccharides as benzimidazole derivatives, 133, 293
- See Stein, Moore, and Bergmann, 139, 481
- See Stein, Moore, Stamm, Chou, and Bergmann, 143, 121
- See Lohmar, Dimler, Moore, and Link, 143, 551
- and Stein, William H. Determination of amino acids by the solubility product method, 150, 113
- Morehouse, Margaret Gulick. Studies on ketosis. XVI. The metabolism of α , β - and β , γ -deuterobutyric acids in the fasting rat, 129, 769
- See Blunden, Hallman, Morehouse, and Deuel, 135, 757
- Morgan, Agnes Fay, Shimotori, Nobuko, and Hendricks, Jeannette B. Progress of hypervitaminoses D₂ and D₃ and recovery in rats, as affected by dietary calcium and phosphorus and vitamin A, 134, 761
- and —. The absorption and retention by dogs of single massive doses of various forms of vitamin D, 147, 189
- See Shimotori and Morgan, 147, 201
- Morgan, Vincent E. See Taylor and Morgan, 144, 15
- Morris, Carol Tilden. See Morris and Morris, 130, 535
- , 141, 515
- Morris, Daniel Luzon, and Morris, Carol Tilden. Glycogen in the seed of *Zea mays* (variety Golden Bantam), 130, 535
- and —. The modification of cupric chloride crystallization patterns by traces of proteins, 141, 515
- Lichenin and araban in oats (*Avena sativa*), 142, 881
- Hydrolysis of starch and glycogen by blood amylase, 148, 271
- Some effects of the intravenous injection of corn glycogen into rabbits, 148, 699
- Morrison, Beatrice Mary. See Handler and Dann, 145, 145
- Morrison, Dumpsie B. See Hisey and Morrison, 130, 763

Morrison, Dempsey B.—*continued*:

- and Williams, Edward F., Jr. The solubility and titration of hemin and ferrihemic acid, 137, 461
- Morton, M. E. See Perlman, Chaikoff, and Morton, 139, 433
- See Perlman, Morton, and Chaikoff, 139, 449
- , Perlman, I., and Chaikoff, I. L. Radioactive iodine as an indicator of the metabolism of iodine. III. The effect of thyrotropic hormone on the turnover of thyroxine and diiodotyrosine in the thyroid gland and plasma, 140, 603
- and Chaikoff, I. L. The *in vitro* formation of thyroxine and diiodotyrosine by thyroid tissue, 144, 565
- and —. The formation *in vitro* of thyroxine and diiodotyrosine by thyroid tissue with radioactive iodine as indicator, 147, 1
- , —, Reinhardt, W. O., and Anderson, Evelyn. Radioactive iodine as an indicator of the metabolism of iodine. VI. The formation of thyroxine and diiodotyrosine by the completely thyroidectomized animal, 147, 757
- Moss, A. R., and Schoenheimer, Rudolf. The conversion of phenylalanine to tyrosine in normal rats, 135, 415
- The conversion of β -phenyllactic acid to tyrosine in normal rats, 137, 739
- Mowry, David T., Brode, Wallace R., and Brown, J. B. Studies on the chemistry of the fatty acids. IX. A spectroscopic study of methyl arachidonate purified by crystallization and distillation and its alkali isomerization product, 142, 671
- , —, and —. X. The structure of arachidonic acid as evidenced by oxidative degradation and selective hydrogenation, 142, 679
- Moxon, Alvin L., Schaefer, A. E., Lardy, H. A., DuBois, K. P., and Olson, O. E. Increasing the rate of excretion of selenium from selenized animals by the administration of *p*-bromobenzene, 132, 785

- Moyer, A. W. See du Vigneaud, Chandler, Moyer, and Keppel, 131, 57
- See du Vigneaud, Chandler, and Moyer, 139, 917
- and du Vigneaud, Vincent. The structural specificity of choline and betaine in transmethylation, 143, 373
- See Melville, Moyer, Hofmann, and du Vigneaud, 146, 487
- Moyer, Elsie Z. See Moyer and Moyer, 132, 357, 373
- Moyer, Laurence S., and Moyer, Elsie Z. Electrokinetic aspects of surface chemistry. VI. The interaction of gelatin with casein and egg albumin at surfaces, 132, 357
- and —. VII. The electrophoretic behavior of microscopic particles in the presence of horse, human, or rabbit serum, 132, 373
- Electrokinetic aspects of surface chemistry. VIII. The composition of the surface film on the fat droplets in cream, 133, 29
- and Gorin, Manuel H. Electrokinetic aspects of surface chemistry. IX. The electric mobilities of quartz and collodion particles in mixtures of horse serum and serum proteins in relation to the mechanism of film formation, 133, 605
- Mozingo, Ralph. See du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris, 146, 475
- Mueller, Arthur J., Kemmerer, Kenneth S., Cox, Warren M., Jr., and Barnes, S. T. The effect of casein and a casein digest on growth and serum protein regeneration, 134, 573
- Mueller, J. Howard, and Miller, Pauline A. Growth requirements of *Clostridium tetani*, 140, 933
- Müller, Otto H. Oxidation-reduction potentials measured with the dropping mercury electrode. IV. Polarographic study of α -oxyphenazine, 145, 425
- Muir, R. D. See Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy, 147, 47

Muir, R. D.—continued:

- See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365
- Mullen, James W., 2nd. See *Pacsu and Mullen*, 136, 335
- Munks, Bertha. See *Beach, Munks, and Robinson*, 148, 431
- Muñoz, Juan M., and Leloir, Luis F. Fatty acid oxidation by liver enzymes, 147, 355
- Munro, F. L. See *Munro and Munro*, 150, 427
- Munro, Muriel Platt, and Munro, F. L. The electrophoretic properties of globin from various species, 150, 427
- Muntwyler, Edward, Mellors, Robert C., and Mautz, Frederick R. Electrolyte and water equilibria in the dog. I. Equilibria in the blood in adrenal insufficiency, 134, 345
- , —, —, and Mangun, George H. Electrolyte and water equilibria in the dog. II. Electrolyte and water exchange between skeletal muscle and blood in adrenal insufficiency, 134, 367
- , —, —, and —. III. Electrolyte and water exchange between tendon and blood, 134, 389
- See *Mellors, Muntwyler, and Mautz*, 144, 773
- See *Mellors, Muntwyler, Mautz, and Abbott*, 144, 785
- Muntz, John A. See *Miller and Muntz*, 126, 413
- Production of acids from glucose by dental plaque material, 148, 225
- Murayama, Makio. See *Greenberg, Campbell, and Murayama*, 136, 35
- Murphy, A. J. See *Beecher, Follansbee, Murphy, and Craig*, 146, 197
- Murray, Sheila. See *Deuel and Hallman*, 140, 545
- Murrill, William A., Block, Walter D., and Newburgh, L. H. Analyses of urinary protein and various fractions of human and pig serum protein, 133, 521
- Mushett, Charles W. See *Silber and Mushett*, 146, 271

- Musulin, R. R., Tully, R. H., 3rd, Longenecker, Herbert E., and King, C. G. Vitamin C synthesis and excretion by the rat, 129, 437
- See *Longenecker, Musulin, Tully, and King*, 129, 445
- Muus, Jytte. See *Hastings, Muus, and Bessey*, 129, 295
- , Weiss, Soma, and Hastings, A. Baird. Tissue metabolism in vitamin deficiencies. II. Effect of thiamine deficiency, 129, 303
- , Coons, Albert H., and Salter, William T. Thyroidal activity of iodinated serum albumin. IV. The effect of progressive iodination, 139, 135
- Myers, Jane. See *Todd, Vreeland, Myers, and West*, 127, 269
- See *Todd, Myers, and West*, 127, 275
- Myers, Victor C. See *Alburn and Myers*, 131, 713
- and Mangun, George H. Comparative studies on creatine, phosphorus, and potassium in various muscle tissues, 132, 701
- See *Corsaro, Mangun, and Myers*, 135, 407
- See *Mangun and Myers*, 135, 411
- See *Free, Davies, and Myers*, 147, 167
- Mylon, E., Winternitz, M. C., and de Sütö-Nagy, G. J. The determination of fibrinogen with protamine, 143, 21

N

- Nachmansohn, D., John, H. M., and Waelsch, Heinrich. Effect of glutamic acid on the formation of acetylcholine, 150, 485
- Najjar, Victor A. The fluorometric determination of riboflavin in urine and other biological fluids, 141, 355
- Nastuk, William L. See *Allison, Cole, Leatham, Nastuk, and Anderson*, 147, 255
- Nelson, C. See *Montgomery, Entenman, Chaikoff, and Nelson*, 137, 693
- Nelson, J. M. See *Baker and Nelson*, 147, 341

- Nelson, J. Walter. See *Seibert and Nelson*, 143, 29
- Nelson, John W. See *Kuizenga, Wick, Ingle, Nelson, and Carlland*, 147, 561
- Nelson, Norton. See *Mirsky, Nelson, and Grayman*, 130, 179
- See *Grayman, Nelson, and Mirsky*, 131, 121
- , Grayman, Isabelle, and Mirsky, I. Arthur. The utilization of acetone bodies. III. The influence of adrenalectomy, 132, 711
- See *Elgart and Nelson*, 138, 443
- , Grayman, Isabelle, and Mirsky, I. Arthur. The utilization of acetone bodies. IV. The relation between concentration and the rate of β -hydroxybutyric acid utilization by the rat, 140, 361
- , Rapoport, S., Guest, George Martin, and Mirsky, I. Arthur. The influence of fasting, epinephrine, and insulin on the distribution of acid-soluble phosphorus in the liver of rats, 144, 291
- Nesbitt, Frances B. See *Buchanan, Hastings, and Nesbitt*, 145, 715
- 150, 413
- Neterval, Charles R. A small apparatus for extracting urinary androgens, 133, 313
- Neurath, Hans, and Saum, Arthur M. The diffusion of tobacco mosaic virus protein in aqueous solution, 126, 435
- and —. The denaturation of serum albumin. Diffusion and viscosity measurements of serum albumin in the presence of urea, 128, 347
- and Cooper, Gerald R. The diffusion constant of tomato bushy stunt virus, 135, 455
- , —, and Erickson, John O. The shape of protein molecules. II. Viscosity and diffusion studies of native proteins, 138, 411
- , —, Sharp, D. G., Taylor, A. R., Beard, Dorothy, and Beard, J. W. Molecular size, shape, and homogeneity of the rabbit papilloma virus protein, 140, 293
- Neurath, Hans—continued:
- See *Sharp, Cooper, and Neurath*, 142, 203
- , Cooper, Gerald R., and Erickson, John O. The denaturation of proteins and its apparent reversal. I. Horse serum albumin, 142, 249
- , —, and —. II. Horse serum pseudo-globulin, 142, 265
- See *Sharp, Cooper, Erickson, and Neurath*, 144, 139
- See *Bernheim, Neurath, and Erickson*, 144, 259
- See *Putnam and Neurath*, 150, 263
- Newburgh, L. H. See *Murrill, Block, and Newburgh*, 133, 521
- Ney, Luman F. See *Carter, Stevens, and Ney*, 139, 247
- Nichols, Peter L., Jr. See *Niemann and Nichols*, 143, 191
- Nicolet, Ben H. See *Shinn and Nicolet*, 138, 91
- and Saidel, Leo J. The hydroxy-amino acids of silk proteins, 139, 477
- and Shinn, Leo A. The determination of serine by the use of periodate, 139, 687
- and —. The special liability of serine and threonine toward alkali, when in peptide combination, 140, 685
- and —. Does hydroxyglutamic acid occur in milk proteins? 142, 139
- , —, and Saidel, Leo J. The liability toward alkali of serine and threonine in proteins, and some of its consequences, 142, 609
- Nield, Cyril H., Russell, Walter C., and Zimmerli, A. The spectrophotometric determination of vitamins D₂ and D₃, 136, 73
- See *Zimmerli, Nield, and Russell*, 148, 245
- Nielsen, Edward, Oleson, J. J., and Elvehjem, C. A. Fractionation of the factor preventing nutritional achromotrichia, 133, 637
- and Elvehjem, C. A. Cure of paralysis in rats with biotin concentrates and crystalline biotin, 144, 405

Nielsen, Edward—*continued*:

- and Elvehjem, C. A. The growth-promoting effect of folic acid and biotin in rats fed succinylsulfathiazole, 145, 713
- Nielsen, Elmer. See *Lepkovsky and Nielsen*, 144, 135
- Nielsen, Verner. See *Hansen and Nielsen*, 131, 309
- Niemann, Carl, and Nichols, Peter L., Jr. The synthesis of *D*-erythro- and *D*-threo- α -amino- β , γ -dihydroxy-*n*-butyric acids, 143, 191
- Nier, A. O. See *Wood, Werkman, Hemingway, and Nier*, 135, 789
139, 365, 377, 483
142, 31
- See *Swendseid, Barnes, Hemingway, and Nier*, 142, 47
- See *Slade, Wood, Nier, Hemingway, and Werkman*, 143, 133
- See *Olsen, Hemingway, and Nier*, 148, 611
- Nimmo, Charles C. See *Luck, Eudin, and Nimmo*, 131, 201
- Nims, L. F. See *Gibbs, Lennox, Nims, and Gibbs*, 144, 325
- , Gibbs, E. L., and Lennox, W. G. Arterial and cerebral venous blood. Changes produced by altering arterial carbon dioxide, 145, 189
- Niven, Charles F., Jr., Smiley, Karl L., and Sherman, J. M. The polysaccharides synthesized by *Streptococcus salivarius* and *Streptococcus bovis*, 140, 105
- See *Gunsalus and Niven*, 145, 131
- and Smiley, Karl L. A microbiological assay method for thiamine, 150, 1
- Nocito, V. See *Green, Nocito, and Ratner*, 148, 461
- Nolan, Laurence S. See *Vickery, Smith, Hubbell, and Nolan*, 140, 613
- Noll, C. I., and Jensen, O. G. The chemical determination of nicotinic acid in milk and milk derivatives, 140, 755
- Nordbø, R. The concentration of ionized magnesium and calcium in milk, 128, 745
- Norris, Earl R. See *Troescher and Norris*, 132, 553

Norris, Earl R.—*continued*:

- and Elam, Daniel W. Preparation and properties of crystalline salmon pepsin, 134, 443
- See *Simmons and Norris*, 140, 679
- Norris, Frank A., Rusoff, Irving I., Miller, Elmer S., and Burr, George O. Fractional distillation of unsaturated fatty acids. I. The effect of vacuum distillation on the absorption spectra of polyethenoid esters from cod liver oil, 139, 199
- , —, —, and —. II. The effect of heat on the rearrangements produced in unsaturated fatty acid esters, 147, 273
- Norris, L. C. See *Hodson and Norris*, 131, 621
- See *Schumacher, Heuser, and Norris*, 135, 313
- See *McGinnis, Norris, and Heuser*, 145, 341
- Norris, William P. See *Carter, Glick, Norris, and Phillips*, 142, 449
- See *Carter and Norris*, 145, 709
- North, H. B. See *Pfiffner and North*, 132, 459, 461
134, 781
139, 855
140, 161
- Nutt, A. L. See *Cohn*, 148, 219

O

- Ochoa, Severo. "Coupling" of phosphorylation with oxidation of pyruvic acid in brain, 138, 751
- Glycolysis and phosphorylation in brain extracts, 141, 245
- α -Ketoglutaric dehydrogenase of heart extracts, 149, 577
- O'Connell, Richard A. See *Lundgren, Elam, and O'Connell*, 149, 183
- O'Connor, Patricia. See *Logan*, 127, 711
- O'Dell, Boyd L., and Hogan, Albert G. Additional observations on the chick antianemia vitamin, 149, 323
- O'Dell, Robert A. See *Zittle and O'Dell*, 139, 753
140, 899
141, 239

- O'Kane, D. J., and Umbreit, W. W. Transformations of phosphorus during glucose fermentation by living cells of *Streptococcus faecalis*, 142, 25
- Okey, Ruth, and Greaves, Vera D. Anemia caused by feeding cholesterol to guinea pigs, 129, 111
- Oleson, J. J. See Bird, Oleson, Elvehjem, and Hart, 126, 671
- , Bird, H. R., Elvehjem, C. A., and Hart, E. B. Additional nutritional factors required by the rat, 127, 23
- See Hegsted, Oleson, Elvehjem, and Hart, 130, 423
- See Nielsen, Oleson, and Elvehjem, 133, 637
- Oleson, Margaret C. See Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead, 139, 897
- and Bloor, W. R. The adrenal lipids of fasted guinea pigs, 141, 349
- Olsen, Norman S., Hemingway, Allan, and Nier, A. O. The metabolism of glycine. I. Studies with the stable isotope of carbon, 148, 611
- Olson, Kenneth B. See Chargaff, Olson, and Partington, 134, 505
- Olson, O. E. See Moxon, Schaefer, Lardy, DuBois, and Olson, 132, 785
- Oncley, J. L. See Green, Knox, and Stumpf, 138, 775
- , Ross, William F., and Tracy, Ann H. Carbon suboxide and proteins. IV. The ultracentrifugal behavior of carbon suboxide-treated horse serum albumin, 141, 797
- Opsahl, Jeanette C. See Arnow and Opsahl, 133, 765
- 134, 649
- Orent-Keiles, Elsa, and McCollum, E. V. Mineral metabolism of rats on an extremely sodium-deficient diet, 133, 75
- Potassium in animal nutrition, 140, 337
- Ormsby, Andrew A. A direct colorimetric method for the determination of urea in blood and urine, 146, 595
- Orten, James M., and Smith, Arthur H. On the site of the formation of citric acid in the animal organism, 128, 101
- Orten, James M.—continued:
- and Devlin, Henry B. The effect of sodium chloride on the glucose tolerance of the diabetic rat, 136, 461
- and Sayers, George. A comparison of the disposition of injected glucose in two strains of rats, 145, 123
- Osborn, W. O. See McCullagh and Osborn, 126, 299
- Oser, Bernard L. See Hochberg, Melnick, Siegel, and Oser, 148, 253
- See Siegel, Melnick, and Oser, 149, 361
- Oster, Robert H. Electrodialysis of tissue chloride. I. The method and controls, 131, 13
- and Amberson, William R. Electrodialysis of tissue chloride. II. Kinetics of removal of chloride from tissues of the dog, 131, 19
- Ott, Lawrence. See Eisenman, Ott, Smith, and Winkler, 135, 165
- Outhouse, Edgar L. See Bowers, Outhouse, and Forbes, 132, 675
- Ovakimian, G., Christman, Clarence C., Kuna, Martin, and Levene, P. A. The reaction of the esters of *dl*-leucine and of *l*-leucine on the Raney catalyst, 134, 151
- , Kuna, Martin, and Levene, P. A. The reaction of the esters of phenylaminoacetic acid and of phenylalanine on the Raney catalyst, 135, 91
- See Kuna, Ovakimian, and Levene, 137, 337
- Overman, Andrea. Influence of some dietary factors on the development of rancidity in the fat of the white rat, 142, 441
- Overman, Ralph S., Stahmann, Mark Arnold, Sullivan, William R., Huebner, Charles Ferdinand, Campbell, Harold A., and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. VII. The effect of 3,3'-methylenebis(4-hydroxycoumarin) on the prothrombin time of the plasma of various animals, 142, 941
- See Black, Overman, Elvehjem, and Link, 145, 137

Overman, Ralph S.—continued:

- , **Stahmann, Mark Arnold, and Link, Karl Paul.** Studies on the hemorrhagic sweet clover disease. VIII. The effect of 2-methyl-1,4-naphthoquinone and *l*-ascorbic acid upon the action of 3,3'-methylenebis(4-hydroxycoumarin) on the prothrombin time of rabbits, 145, 155
- See **Baumann, Field, Overman, and Link,** 146, 7
- See **Link, Overman, Sullivan, Huebner, and Scheel,** 147, 463
- Owen, Charles A.** See **Smith and Owen,** 134, 783

P

- Pace, Nello.** Pigments of the marine diatom *Nitzschia closterium*, 140, 483
- Pacsu, Eugene, and Mullen, James W., 2nd.** An improved method for the resolution of synthetic alanine, 136, 335
- Page, Irvine H.** See **Corcoran and Page,** 127, 601
- See **Helmer and Page,** 127, 757
- See **Corcoran, Helmer, and Page,** 129, 89
- See **Plenil and Page,** 147, 135
- See **Plenil, Page, and Davis,** 147, 143
- Painter, Edgar Page, and Franke, Kurt W.** The decomposition of seleniferous proteins in alkaline solutions, 134, 557
- Palmer, Albert H.** See **Levy and Palmer,** 136, 57
- and **Levy, Milton.** Chemistry of the chick embryo. I. The dipeptidase of chick embryo extracts, 136, 407
- See **Levy and Palmer,** 136, 415
- and **Levy, Milton.** Chemistry of the chick embryo. III. Distribution of dipeptidase in the cephalic region of the three day embryo, 136, 629
- See **Cannan, Palmer, and Kibrick,** 142, 803
- See **Levy and Palmer,** 146, 493
- 150, 271

- Palmer, Lucille E.** See **d'Elseaux, Blackwood, Palmer, and Sloman,** 144, 529
- Pangborn, Mary C.** A note on the purification of lecithin, 137, 545
- Isolation and purification of a serologically active phospholipid from beef heart, 143, 247
- Pappenheimer, Alwin M., Jr.** See **Hottle, Lampen, and Pappenheimer,** 137, 457
- Parrott, Ernest M.** See **Hogan and Parrott,** 132, 507
- Parsons, Della.** See **Lepkovsky and Parsons,** 149, 281
- Parsons, Helen T.** See **Strong, Feeney, Moore, and Parsons,** 137, 363
- Partington, Philip F.** See **Chargaff, Olson, and Partington,** 134, 505
- Pass, I. J.** See **Watson, Pass, and Schwartz,** 139, 583
- Patras, Mary C.** See **Tweedy, Templeton, Patras, McJunkin, and McNamara,** 128, 407
- Patterson, Jean M., and McHenry, E. W.** Choline and the prevention of hemorrhagic kidneys in the rat, 145, 207
- See **Gavin, Patterson, and McHenry,** 148, 275
- Patterson, Wilbur I.** See **du Vigneaud, Patterson, and Hunt,** 126, 217
- Pauling, Linus.** See **Coryell and Pauling,** 132, 769
- Pauls, Frances, and Drury, Douglas R.** The influence of insulin upon glycogen storage in the diabetic rat, 145, 481
- Pavcek, P. L., and Shull, G. M.** Inactivation of biotin by rancid fats, 146, 351
- Peacock, Gail.** See **Emmett, Peacock, and Brown,** 135, 131
- Pearl, Irwin A.** Determination of iodides in urine, 148, 85
- Pearlman, W. H., and Wintersteiner, O.** Estrogens with oxygen in Ring B. I. 7-Ketoestrone and 7-hydroxyestrone, 130, 35
- and —. II. Δ^6 -Isoequilin from 7-hydroxyestrone, 132, 605

Pearlman, W. H.—*continued*:

— The isolation of etioallocholanol-3(β)-17-one (isoandrosterone) from normal and pathological human urines, 136, 807

—, Pincus, Gregory, and Werthessen, Nicholas T. The isolation of allo-pregnanol-3(β)-one-20 from human pregnancy urine, 142, 649

— and —. Conversion of estrone to estriol *in vitro*, 144, 569

— and —. The metabolism of estrone in men, 147, 379

Pearson, P. B. The nicotinic acid content of the blood of Mammalia, 129, 491

— The pantothenic acid content of the blood of Mammalia, 140, 423

Peck, Robert L. See *Anderson, Creighton, and Peck*, 133, 675

— and Hauser, Charles R. Chemical studies of certain pathogenic fungi. III. Further studies on the lipids of *Blastomyces dermatitidis* and *Monilia albicans*, 134, 403

— See *Anderson, Peck, and Creighton*, 136, 211

— and **Anderson, R. J.** The chemistry of the lipids of tubercle bacilli. LXIII. The fatty acids in the phosphatide prepared from cell residues from tuberculin, 138, 135

— and —. LXIV. Concerning phleimycolic acid, 140, 89

Pecker, A. See *Greenblatt and Pecker*, 134, 341

Pelczar, Michael J., Jr., and Porter, J. R. A microbiological assay technique for pantothenic acid with the use of *Proteus morganii*, 139, 111

Pennington, Derrol. See *Snell, Pennington, and Williams*, 133, 559

—, **Snell, Esmond E., and Williams, Roger J.** An assay method for pantothenic acid, 135, 213

Pepkowitz, Leonard P. The stability of carotene in acetone and petroleum ether extracts of green vegetables. I. The photochemical destruction of

carotene in the presence of chlorophyll.

II. The stabilizing effect of sodium cyanide, 149, 465

Pereira, Rubens Salomé. A new photometric method for the determination of iron, 137, 417

Perilstein, Warren L. See *Lough, Perilstein, Heinen, and Carter*, 139, 487

Perkins, Marie E. See *Clark and Perkins*, 135, 643

Perkinson, Jesse D., Jr. See *Sealock, Perkinson, and Basinski*, 140, 153

Perlman, I., and Chaikoff, I. L. Radioactive phosphorus as an indicator of phospholipid metabolism. V. On the mechanism of the action of choline upon the liver of the fat-fed rat, 127, 211

— and —. VII. The influence of cholesterol upon phospholipid turnover in the liver, 128, 735

— and —. VIII. The influence of betaine on the phospholipid activity of the liver, 130, 593

—, **Stillman, N., and Chaikoff, I. L.** Radioactive phosphorus as an indicator of phospholipid metabolism.

XI. The influence of methionine, cystine, and cysteine upon the phospholipid turnover in the liver, 133, 651

—, —, and —. XII. Further observations on the effects of amino acids on phospholipid activity of the liver, 135, 359

—, **Chaikoff, I. L., and Morton, M. E.** Radioactive iodine as an indicator of the metabolism of iodine. I. The turnover of iodine in the tissues of the normal animal, with particular reference to the thyroid, 139, 433

—, **Morton, M. E., and Chaikoff, I. L.** Radioactive iodine as an indicator of the metabolism of iodine. II. The rates of formation of thyroxine and diiodotyrosine by the intact normal thyroid gland, 139, 449

— See *Morton, Perlman, and Chaikoff*, 140, 603

Perlman, I.—continued:

— See *Fishler, Taurog, Perlman, and Chaikoff*, 141, 809

— See *Taurog, Chaikoff, and Perlman*, 145, 281

Perlmann, Gertrude E. Combination of proteins and metaphosphoric acid, 137, 707

— and *Ferry, Ronald M.* A note on the separation of kidney phosphatases, 142, 513

Perlzweig, William A. See *Sarett, Perlzweig, and Levy*, 135, 483

—, *Levy, Edward D.*, and *Sarett, Herbert P.* Nicotinic acid derivatives in human urine and their determination, 136, 729

— See *Huff and Perlzweig*, 142, 401

— See *Klein, Perlzweig, and Handler*, 145, 27

— See *Huff and Perlzweig*, 150, 395

—, *Bernheim, Mary L. C.*, and *Bernheim, Frederick.* The methylation of nicotinamide by rat liver *in vitro*, 150, 401

— See *Huff and Perlzweig*, 150, 483

Petermann, Mary L. The action of papain on beef serum pseudoglobulin and on diphtheria antitoxin, 144, 607

— and *Hakala, N. V.* Molecular kinetic and electrophoretic studies on carbonic anhydrase, 145, 701

Peters, David D. See *Sobel, Yuska, Peters, and Kramer*, 132, 239

Peters, John H. The determination of creatinine and creatine in blood and urine with the photoelectric colorimeter, 146, 179

Peters, John P. See *Solomon, Hald, and Peters*, 132, 723

Petersen, W. E. See *Shaw and Petersen*, 147, 639

Peterson, Ralph E. Essential factors for the growth of the ciliate protozoan, *Colpidium campylum*, 146, 537

Peterson, V. E. See *Reineke, Peterson, and Turner*, 128, 1

Peterson, W. H. See *Christensen, Johnson, and Peterson*, 127, 421

— See *Woolley, McDaniel, and Peterson*, 131, 381

Peterson, W. H.—continued:

— See *Hutchings, Bohonos, Hegsted, Elvehjem, and Peterson*, 140, 681

— See *Hutchings, Bohonos, and Peterson*, 141, 521

— See *Shull, Hutchings, and Peterson*, 142, 913

— See *McIntire, Peterson, and Riker*, 143, 491

— See *Lampen, Underkofler, and Peterson*, 146, 277

— See *Bohonos and Peterson*, 149, 295

Pett, L. B., and LePage, G. A. Vitamin A deficiency. III. Blood analysis correlated with a visual test, 132, 585

— See *LePage and Pett*, 141, 747

Pettit, Dorothy Seymour. See *Bachman and Pettit*, 138, 689

Pfiffner, J. J., and North, H. B. 17- β -Hydroxyprogesterone, 132, 459

— and —. A new adrenal base, 132, 461

— and —. Dimethyl sulfone; a constituent of the adrenal gland, 134, 781

— and —. The isolation of 17-hydroxyprogesterone from the adrenal gland, 139, 855

— and —. The isolation of a new α, β -unsaturated ketone from the adrenal gland, 140, 161

Phillips, George E. See *Carter, Glick, Norris, and Phillips*, 142, 449

Phillips, Paul H. Preservation of bull semen, 130, 415

— See *Lardy and Phillips*, 138, 195

— See *Boyer, Shaw, and Phillips*, 143, 417

— See *Boyer, Lardy, and Phillips*, 146, 673

— See *Lardy and Phillips*, 148, 333, 343
149, 177

— See *Boyer, Lardy, and Phillips*, 149, 529

Phillips, Robert A. See *Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller*, 150, 481

Pickels, E. G. See *Schmidt, Pickels, and Levene*, 127, 251

Pierce, John G. See *Loring and Pierce*, 148, 35

- Piersma, Henry D. See *Christensen, Edwards, and Piersma*, 141, 187
- Pilgrim, Francis J., Axelrod, A. E., and Elvehjem, C. A. The metabolism of pyruvate by liver from pantothenic acid- and biotin-deficient rats, 145, 237
- Pillemer, L. See *Ecker, Pillemer, Jones, and Seifter*, 135, 347
- and Ecker, E. E. Anticomplementary factor in fresh yeast, 137, 139
- Pincus, Gregory. See *Pearlman, Pincus, and Werthessen*, 142, 649
- See *Pearlman and Pincus*, 144, 569
- 147, 379
- Pitesky, Isadore. See *Flox, Pitesky, and Alving*, 142, 147
- Platz, Blanche R. See *Schneider, Steenbock, and Platz*, 132, 539
- See *Quackenbush, Steenbock, and Platz*, 145, 163
- Plazin, John. See *Van Slyke and Folch*, 136, 509
- Plentl, Albert A., and Page, Irvine H. The enzymatic nature of angiotonin formation from renin and renin activator, 147, 135
- , —, and Davis, W. W. The nature of renin activator, 147, 143
- Poe, Charles F. See *Larsen and Poe*, 132, 129
- See *Field and Poe*, 132, 473
- Pohl, Herbert A., and Flexner, Louis B. Transfer of radioactive sodium across the placenta of the cat, 139, 163
- Polgár, A. See *Zechmeister and Polgár*, 139, 193
- 140, 1
- Poling, C. E. See *György, Poling, and Subbarow*, 132, 789
- Pollack, Maxwell A., and Lindner, Manfred. Glutamine and glutamic acid as growth factors for lactic acid bacteria, 143, 655
- and —. A growth stimulant for *Lactobacillus casei*, 147, 183
- Pollok, Heinz. See *Bergmann, Fruton, and Pollok*, 127, 643
- Ponder, Eric. The relation between red blood cell density and corpuscular hemoglobin concentration, 144, 333
- Ponder, Eric—continued:
- Errors affecting the acid and the alkali hematin methods of determining hemoglobin, 144, 339
- Poo, L. J., Lew, W., and Addis, T. Protein anabolism of organs and tissues during pregnancy and lactation, 128, 69
- Porter, J. R. See *Pelczar and Porter*, 139, 111
- Porush, Irving. See *Dunn and Porush*, 127, 261
- Potter, V. R., Elvehjem, C. A., and Hart, E. B. Anemia studies with dogs, 126, 155
- Studies on the mechanism of hydrogen transport in animal tissues. I. Triose phosphate oxidation in the presence of malonate, 134, 417
- See *Lockhart and Potter*, 137, 1
- Studies on the mechanism of hydrogen transport in animal tissues. III. Cyanide inhibition of cytochrome c reduction, 137, 13
- IV. The succinoxidase system, 141, 775
- See *Axelrod, Potter, and Elvehjem*, 142, 85
- and DuBois, K. P. The quantitative determination of cytochrome c, 142, 417
- and Schneider, W. C. Studies on the mechanism of hydrogen transport in animal tissues. V. Dilution effects in the succinoxidase system, 142, 543
- See *DuBois and Potter*, 147, 41
- See *DuBois, Albaum, and Potter*, 147, 699
- See *DuBois and Potter*, 148, 451
- See *Schneider and Potter*, 149, 217
- See *DuBois and Potter*, 150, 185
- Potts, Albert M., and Gallagher, T. F. Cystine, tyrosine, and arginine content of high potency pressor and oxytocic pituitary hormones, 143, 561
- Powell, Eugene L. See *Hogan, Powell, and Guerrant*, 137, 41
- Powell, Ross C., Jr., and Shaw, J. C. The non-utilization of lactic acid by the lactating mammary gland, 146, 207

- Prebluda, Harry J., and McCollum, E. V.
A chemical reagent for thiamine,
127, 495
- Price, Donald. See *Weinstock, May, Arnold, and Price*, 135, 343
- Price, J. Waide. See *Robinson, Price, and Hogden*, 126, 207, 213
- Price, W. C. See *Lauffer and Price*, 133, 1
- Pucher, George W., Wakeman, Alfred J., and Vickery, Hubert Bradford. The organic acids of rhubarb (*Rheum hybridum*). III. The behavior of the organic acids during culture of excised leaves, 126, 43
- See *Vickery and Pucher*, 128, 685, 703
- See *Vickery, Pucher, Schoenheimer, and Rittenberg*, 129, 791
- See *Vickery, Pucher, and Deuber*, 145, 45
- The organic acids of the leaves of *Bryophyllum calycinum*, 145, 511
- and Vickery, Hubert Bradford. On the identity of the so called crassulacean malic acid with isocitric acid, 145, 525
- See *Vickery and Pucher*, 150, 197
- Puck, T. T. See *Wise, Puck, and Stral*, 150, 61
- Purinton, Helen J., and Schuck, Cecilia. Metabolic interrelationships of ascorbic and citric acids, 148, 237
- Putnam, Frank W., and Neurath, Hans. Complex formation between synthetic detergents and proteins, 150, 263
- Q
- Quackenbush, F. W., Steenbock, H., and Platz, Blanche R. The non-specificity of thiamine in fat synthesis, 145, 163
- , Cox, R. P., and Steenbock, H. Tocopherol and the stability of carotene, 145, 169
- R
- Rabinovitch, Alexander. See *Austoni, Rabinovitch, and Greenberg*, 134, 17
- Rabinowitch, L., and Wynne, A. M. Studies on pancreatic lipase. III. The activation of the washed enzyme by blood serum and other substances, 126, 109
- Raborg, Jane. See *Stotz and Raborg*, 150, 25
- Rachele, Julian R. See *du Vigneaud, Hofmann, Melville, and Rachele*, 140, 763
- Rae, James J., and Eastcott, Edna V. The effect of urea and sodium chloride on the colorimetric determination of organic phosphate by King's method, 129, 255
- and —. The estimation of phosphatase in yeast, 136, 443
- Rafferty, M. A., and MacLachlan, P. L. Influence of increased environmental temperature on blood sugar, liver glycogen, and absorption in rats following the administration of glucose and starch, 140, 167
- Raistrick, H. See *Birkinshaw and Raistrick*, 148, 459
- Ralli, Elaine P., Clarke, Delphine H., and Kennedy, Ethelmay. The sodium chloride levels and the effect of sodium chloride administration on the abnormal manifestations associated with a deficiency of the filtrate factors of vitamin B in rats, 141, 105
- Ramsdell, Pauline A. See *Ball and Ramsdell*, 131, 767
- Randall, F. E. See *Scott, Randall, and Hessel*, 141, 325
- Randall, Lowell O. Effect of repeated insulin hypoglycemia on the lipid composition of rabbit tissues, 133, 129
- Effect of testosterone on serum lipids in schizophrenia, 133, 137
- Rane, Leo, and Subbarow, Yellapragada. Choline, pantothenic acid, and nicotinic acid as essential growth factors for pneumococcus, 134, 455
- Ranney, Helen, and McCune, D. J. A photometric micromethod for the determination of inulin in serum and urine, 150, 311

- Raper, John R., and Haagen-Smit, A. J. Sexual hormones in *Achlya*. IV. Properties of hormone A of *Achlya bisexualis*, 143, 311
- Rapoport, S., and Guest, George Martin. Changes of organic acid-soluble phosphorus, diphosphoglycerate, adenosinetriphosphate, and inorganic phosphorus in the blood cells of rats during the development and healing of rickets, 126, 749
- and —. The decomposition of diphosphoglycerate in acidified blood: its relationship to reactions of the glycolytic cycle, 129, 781
- and —. The rôle of diphosphoglyceric acid in the electrolyte equilibrium of blood cells: studies of pyloric obstruction in dogs, 131, 675
- . Phytic acid in avian erythrocytes, 135, 403
- and Guest, George Martin. Distribution of acid-soluble phosphorus in the blood cells of various vertebrates, 138, 269
- , Leva, Ernst, and Guest, George Martin. Phytase in plasma and erythrocytes of various species of vertebrates, 139, 621
- , —, and —. Phosphorus exchange in phytate, lipids, and nucleoproteins in the erythrocytes of geese, 139, 633
- . See Leva and Rapoport, 141, 343
- and Guest, George Martin. The formation of phosphorylated glyceric acid in the blood cells of various species, 143, 671
- . See Nelson, Rapoport, Guest, and Mirsky, 144, 291
- . See Leva and Rapoport, 149, 47
- , Leva, Ernst, and Guest, George Martin. The distribution of acid-soluble phosphorus in the livers of rats, fed and fasting, 149, 57
- , —, and —. The distribution of acid-soluble phosphorus in the livers of fasted rats fed glucose, casein, olive oil, or a mixed diet, 149, 65
- Ratish, Herman D., Bullowa, Jesse G. M., Ames, James B., and Scudi, John V. Urinary excretion products of sulfanilyl-2-aminopyridine, 128, 279
- Ratner, S. See Schoenheimer and Ratner, 127, 301
- . See Schoenheimer, Ratner, and Rittenberg, 127, 333
130, 703
- , Schoenheimer, Rudolf, and Rittenberg, D. Studies in protein metabolism. XIII. The metabolism and inversion of *d*(+)-leucine studied with two isotopes, 134, 653
- , Rittenberg, D., Keston, Albert S., and Schoenheimer, Rudolf. Studies in protein metabolism. XIV. The chemical interaction of dietary glycine and body proteins in rats, 134, 665
- , —, and Schoenheimer, Rudolf. The stability of hydrogen-carbon linkages in glutamic acid, 135, 357
- . See Roloff, Ratner, and Schoenheimer, 136, 561
- . See Schoenheimer, Ratner, Rittenberg, and Heidelberger, 144, 541, 545
- . See Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg, 144, 555
- , Weissman, Norman, and Schoenheimer, Rudolf. The metabolism of *d*-lysine investigated with deuterium and heavy nitrogen, 147, 549
- . See Green, Nocito, and Ratner, 148, 461
- Rawson, Ruth A. See Guest and Rawson, 139, 535
- Ray, Thomas W. The determination of manganese in organic material containing large amounts of calcium and chlorides. The determination of manganese in the mouse and in milk, 134, 677
- Raymond, Albert L., Tipson, R. Stuart, and Levene, P. A. The substitution of glucose in position 4. II. 2,3-Diacetyl β -benzylglucoside and its derivatives, 130, 47
- Redd, John C. See Anderson, Seeley, Stewart, Redd, and Westerbeke, 135, 189

- Redemann, C. E., and Dunn, Max S.** A general method for the synthesis of α -amino acids with ethyl benzamidomalonate, 130, 341
- Redish, Jules.** See *Greenwald, Redish, and Kibrick*, 135, 65
- Reed, Gerald.** The polarographic estimation of cystine in urine, 142, 61
- Reeves, Richard E., and Goebel, Walther F.** Chemoimmunological studies on the soluble specific substance of pneumococcus. V. The structure of the Type III polysaccharide, 139, 511
— See *Adams, Reeves, and Goebel*, 140, 653
- Reichel, Max.** See *Thannhauser and Reichel*, 135, 1
— and *Thannhauser, S. J.* Studies on animal lipids. XVII. The synthesis of lignoceryl sphingosine fatty acid esters (sphingosine fats) and sphingosine amides (ceramides), 135, 15
- Reinecke, Roger M.** The application of the skatole color reaction to the determination of fructose in blood, 142, 487
— The determination of glucose in minimal quantities of blood, 143, 351
- Reineke, E. P., Peterson, V. E., and Turner, C. W.** The partition of the serum globulins of the dairy goat, 128, 1
—, *Williamson, M. B., and Turner, C. W.* Utilization of glycoprotein of the blood plasma by the lactating mammary gland, 138, 83
—, —, and —. The effect of progressive iodination on the thyroidal activity of iodinated casein, 143, 285
—, —, and —. The effect of progressive iodination followed by incubation at high temperature on the thyroidal activity of iodinated proteins, 147, 115
— and *Turner, C. W.* The recovery of crystalline thyroxine from iodinated casein, 149, 555
— and —. The recovery of *l*-thyroxine from iodinated casein by direct hydrolysis with acid, 149, 563
- Reiner, L., and Lang, E. H.** Insulin azo derivatives, 139, 641
— See *Searle and Reiner*, 141, 563
- Reiner, L.—continued:**
—, *Moore, Dan H., Lang, E. H., and Green, Milton.* Electrophoretic components of globin, 146, 583
- Reinhardt, W. O.** See *Morton, Chaikoff, Reinhardt, and Anderson*, 147, 757
- Reinhart, Francis E.** See *Woodward, Reinhart, and Dohan*, 138, 677
— See *Woodward and Reinhart*, 145, 471
- Reinhart, Harry L.** See *Shinowara, Jones, and Reinhart*, 142, 921
- Reinstein, Harold.** See *Thannhauser, Benotti, and Reinstein*, 129, 709
— See *Thannhauser, Benotti, Walcott, and Reinstein*, 129, 717
- Reiser, Raymond.** Phosphorus changes during the absorption of oil and glucose, 135, 303
— The lipids of the duodenal mucosa of swine during the absorption of fat, 143, 109
- Reithel, F. J.** See *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 147, 47
— See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365
- Remmert, LeMar F., and Butts, Joseph S.** Studies in amino acid metabolism VIII. The metabolism of *l*(-)-histidine in the normal rat, 144, 41
- Rennebaum, E. H.** See *Martin, Rennebaum, and Thompson*, 139, 871
- Rhoads, C. P.** See *Kensler, Young, and Rhoads*, 143, 465
- Rice, Eldon E.** See *Rose and Rice*, 130, 305
— A simplified procedure for the isolation of lysine from protein hydrolysates, 131, 1
- Richards, A. N.** See *Bott and Richards*, 141, 291
- Richards, Marianna M., and Hellerman, Leslie.** Activation of enzymes. VI. Purified liver arginase: reversible inactivation and reactivation, 134, 237
- Riegel, Byron, Schweitzer, Carl E., and Smith, Perrin G.** The physicochemical concentration of vitamin K, 129, 495

- Riemenschneider, R. W., Ellis, N. R., and Titus, Harry W.** The fat acids in the lecithin and glyceride fractions of egg yolk, 126, 255
- , **Wheeler, D. H., and Sando, Charles E.** The probable identity of α - and β -linoleic acids, 127, 391
- , See **Wheeler, Riemenschneider, and Sando**, 132, 687
- Riggs, Benjamin C., and Stadie, William C.** A photoelectric method for the determination of peptic activity in gastric juice, 150, 463
- Riggs, D. S., and Man, Evelyn B.** A permanganate acid ashing micro-method for iodine determinations. I. Values in blood of normal subjects, 134, 193
- , **Lavietes, Paul H., and Man, Evelyn B.** Investigations on the nature of blood iodine, 143, 363
- Riker, A. J.** See **McIntire, Peterson, and Riker**, 143, 491
- Rinehart, Robert E.** See **West, Christensen, and Rinehart**, 132, 631
- , See **West and Rinehart**, 146, 105
- Ringel, S. J.** See **Horn, Jones, and Ringel**, 138, 141
- 144, 87, 93
- Risser, William C.** See **Carter and Risser**, 139, 255
- Rittenberg, D.** See **Schoenheimer and Rittenberg**, 127, 285
- , **Keston, Albert S., Rosebury, F., and Schoenheimer, Rudolf.** Studies in protein metabolism. II. The determination of nitrogen isotopes in organic compounds, 127, 291
- , See **Keston, Rittenberg, and Schoenheimer**, 127, 315
- , See **Foster, Schoenheimer, and Rittenberg**, 127, 319
- , and **Schoenheimer, Rudolf.** Studies in protein metabolism. VI. Hippuric acid formation studied with the aid of the nitrogen isotope, 127, 329
- , See **Schoenheimer, Ratner, and Rittenberg**, 127, 333
- , See **Schoenheimer, Rittenberg, and Keston**, 127, 385
- , **Schoenheimer, Rudolf, and Keston, Albert S.** Studies in protein metabolism. IX. The utilization of ammonia by normal rats on a stock diet, 128, 603
- , See **Vickery, Pucher, Schoenheimer, and Rittenberg**, 129, 791
- , See **Schoenheimer, Ratner, and Rittenberg**, 130, 703
- , See **du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg**, 131, 273
- , See **Clutton, Schoenheimer, and Rittenberg**, 132, 227
- , and **Foster, G. L.** A new procedure for quantitative analysis by isotope dilution, with application to the determination of amino acids and fatty acids, 133, 737
- , See **Graff, Rittenberg, and Foster**, 133, 745
- , See **Ratner, Schoenheimer, and Rittenberg**, 134, 653
- , See **Ratner, Rittenberg, Keston, and Schoenheimer**, 134, 665
- , See **Ratner, Rittenberg, and Schoenheimer**, 135, 357
- , See **Vickery, Pucher, Schoenheimer, and Rittenberg**, 135, 531
- , and **Waelisch, Heinrich.** The source of carbon for urea formation, 136, 799
- , See **Bloch, Schoenheimer, and Rittenberg**, 138, 155
- , See **Chargaff, Ziff, and Rittenberg**, 138, 439
- , See **Waelisch and Rittenberg**, 139, 761
- , See **Bloch and Rittenberg**, 143, 297
- , See **Waelisch and Rittenberg**, 144, 53
- , See **Chargaff, Ziff, and Rittenberg**, 144, 343
- , See **Schoenheimer, Ratner, Rittenberg, and Heidelberger**, 144, 541, 545
- , See **Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg**, 144, 555
- , See **Bloch and Rittenberg**, 145, 625
- , See **Hoberman and Rittenberg**, 147, 211
- , See **Bloch and Rittenberg**, 149, 505
- , See **Bloch, Berg, and Rittenberg**, 149, 511

- Ritzmann, Johana R. See *Wintersteiner and Ritzmann*, 136, 697
- Roberts, E. C., Cain, C. K., Muir, R. D., Reithel, F. J., Gaby, W. L., Van Bruggen, J. T., Homan, D. M., Katzman, Philip A., Jones, L. R., and Doisy, Edward A. Penicillin B, an antibacterial substance from *Penicillium notatum*, 147, 47
- See *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 148, 365
- Roberts, Eugene, and Christman, A. A. The influence of lactose and its hydrolysis products on the absorption of calcium, 145, 267
- Roberts, Richard G. Some reactions of ammonolyzed insulin, 128, 597
- Roberts, Richard M. See *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 139, 787
- Roberts, Willard L. See *Campbell, Roberts, Smith, and Link*, 136, 47
- See *Campbell, Smith, Roberts, and Link*, 138, 1
- Robertson, William van B., Ropes, Marian W., and Bauer, Walter. Mucinase: a bacterial enzyme which hydrolyzes synovial fluid mucin and other mucins, 133, 261
- Robeson, C. D. See *Baxter, Harris, Hickman, and Robeson*, 141, 991
- Robinson, Abner. See *Beach, Munks, and Robinson*, 148, 431
- Robinson, C. S., Stewart, David Earl, and Luckey, Freeman. The changes in composition of solutions of calcium chloride and calcium lactate in the intestine, 137, 283
- , Luckey, Hugh, and Mills, Hugh. Factors affecting the hydrogen ion concentration of the contents of the small intestine, 147, 175
- Robinson, Howard W., Price, J. Waide, and Hogden, Corinne G. The estimation of albumin and globulin in blood serum. II. Separation of fractions by centrifugation with the angle centrifuge, 126, 207
- , — and —. III. The precipitation of
- Robinson, Howard W.—*continued*:
 globulin at twenty-five degrees by sodium sulfate, 126, 213
- and Hogden, Corinne G. The biuret reaction in the determination of serum proteins. I. A study of the conditions necessary for the production of a stable color which bears a quantitative relationship to the protein concentration, 135, 707
- and —. II. Measurements made by a Duboseq colorimeter compared with values obtained by the Kjeldahl procedure, 135, 727
- and —. The influence of serum proteins on the spectrophotometric absorption curve of phenol red in a phosphate buffer mixture, 137, 239
- and —. The gravimetric determination of blood serum proteins, 140, 853
- Robinson, Sid. See *Dill, Wilson, Hall, and Robinson*, 136, 449
- Robinson, William D. See *Melnick, Robinson, and Field*, 136, 131, 145, 157, 138, 49
- Roboz, Elisabeth. See *Lepkovsky, Roboz, and Haagen-Smit*, 149, 195
- Rocha e Silva, M., and Andrade, Sylvia O. Histamine and proteolytic enzymes. Liberation of histamine by papain, 149, 9
- Rodden, Clement J. See *du Vigneaud, Miller, and Rodden*, 131, 631
- Roe, Joseph H., and Hall, James M. The vitamin C content of human urine and its determination through the 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, 128, 329
- See *Kassan and Roe*, 133, 579
- and Kuether, Carl A. The determination of ascorbic acid in whole blood and urine through the 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, 147, 399
- Roepeke, Raymond R., and Baldes, Edward J. A critical study of the thermoelectric method of measuring vapor pressure, 126, 349
- and Mason, Harold L. Micelle formation in aqueous solutions of bile salts, 133, 103

- Rogers, R. E. See *Stokstad, Manning, and Rogers*, 132, 463
- See *Stokstad, Almquist, Mecchi, Manning, and Rogers*, 137, 373
- Roloff, Marjorie, Ratner, S., and Schoenheimer, Rudolf. The biological conversion of ornithine into proline and glutamic acid, 136, 561
- Roma, Michael. See *Eichelberger*, 140, 467
- Romanoff, Elijah B. See *Looney and Romanoff*, 136, 479
- Ropes, Marian W. See *Robertson, Ropes, and Bauer*, 133, 261
- Rosdahl, Karl Gustaf. See *Ågren, Hammarsten, and Rosdahl*, 127, 541
- Rose, Catharine S. See *György, Rose, and Tomarelli*, 144, 169
- Rose, William C., and Eppstein, Samuel H. The dietary indispensability of valine, 127, 677
- and Rice, Eldon E. The utilization of certain sulfur-containing compounds for growth purposes, 130, 305
- See *Womack and Rose*, 141, 375
- and Wood, Thomas R. The synthesis of cystine *in vivo*, 141, 381
- and Fierke, Scheuring S. The relation of aspartic acid and glucosamine to growth, 143, 115
- , Johnson, Julius E., and Haines, William J. The metabolism of valine in phlorhizin glycosuria, 145, 679
- , Haines, William J., and Johnson, Julius E. The rôle of the amino acids in human nutrition, 146, 683
- , —, and Warner, Donald T. Further experiments on the rôle of the amino acids in human nutrition, 148, 457
- Rosebury, F. See *Rittenberg, Keston, Rosebury, and Schoenheimer*, 127, 291
- Rosen, Charles. See *Evelyn, Malloy, and Rosen*, 126, 645
- Rosenbaum, Jack D., and Lavietes, Paul H. Lipoid-thiocyanate in serum, 131, 663
- Rosenblum, Harold. See *Sofin, Rosenblum, and Shultz*, 147, 557
- Rosenblum, Louis A., and Jolliffe, Norman. Application to urine of Bandier and Hald's method for determination of nicotinic acid, 134, 137
- Rosenfeld, Bruno. The irreversible transformation of dehydroascorbic acid, 150, 281
- Rosenfeld, Morris. A photoelectric photometer for colorimetric chemical analysis, 129, 179
- Rosenthal, Otto, and Drabkin, David L. Spectrophotometric studies. XI. The direct micro spectrophotometric determination of cytochrome *c*, 149, 437
- and —. The cytochrome *c* content of normal and neoplastic mammalian epithelium, and its correlation with body mass, 150, 131
- Rosner, Lawrence. The reaction between iodoacetic acid and denatured egg albumin, 132, 657
- Ross, A. Frank. The sulfur distribution in tobacco mosaic virus protein, 136, 119
- The determination of some amino acids in tobacco mosaic virus protein, 138, 741
- The fractionation of the amino acids of tobacco mosaic virus protein, 143, 685
- Ross, Victor, Moore, Dan H., and Miller, Edgar G., Jr. Proteins of human seminal plasma, 144, 667
- Ross, William F. The phytylchromogen of protoporphyrin and pyridine, 127, 163
- The heme-globin linkage of hemoglobin. I. The course of the pancreatic digestion of oxyhemoglobin and of carboxyhemoglobin, 127, 169
- II. The molecular weight of the product from carboxyhemoglobin, 127, 179
- and Christensen, Halvor N. Carbon suboxide and proteins. I. The nature of the reaction, 137, 89
- See *Christensen and Ross*, 137, 101
- and Green, Leila S. Carbon suboxide and proteins. III. The reaction of carbon suboxide with amino acids, 137, 105

Ross, William F.—*continued*:

- and Turner, Richard B. The heme-globin linkage of hemoglobin. III. Analysis of the carbon monoxide product. The pancreatic digestions of several forms of hemoglobin, 139, 603
- See *Oncley, Ross, and Tracy*, 141, 797
- See *Tracy and Ross*, 142, 871
- and Tracy, Ann H. Carbon suboxide and proteins. VI. Chymotryptic digestion of malonyl egg and serum albumins, 145, 19
- and Wood, Thomas R. The partial purification and some observations on the nature of the parathyroid hormone, 146, 49
- See *Wood and Ross*, 146, 59
- See *Tracy and Ross*, 146, 63
- Rossiter, Roger James. Some factors influencing the oxidation of alanine by liver tissue, 135, 431
- Rothen, Alexandre. See *Levene and Rothen*, 127, 237
- Roughton, F. J. W. A simple, accurate method of estimating carbon monoxide in blood, 137, 617
- A method of allowing for the influence of diffusion in manometric measurements of certain rapid biochemical reactions, 141, 129
- See *Horvath and Roughton*, 144, 747
- and Scholander, P. F. Micro gasometric estimation of the blood gases. I. Oxygen, 148, 541
- See *Scholander and Roughton*, 148, 551
- See *Edwards, Scholander, and Roughton*, 148, 565
- See *Scholander and Roughton*, 148, 573
- Routh, Joseph I. The decomposition of cystine in aqueous solution, 126, 147
- The decomposition of cysteine in aqueous solution, 130, 297
- Chemical studies on powdered wool, 135, 175
- Ruben, S. See *Changus, Chaikoff, and Ruben*, 126, 493

- Rubin, Jack. See *Alving, Rubin, and Miller*, 127, 609
- Rubin, Louis B. See *Shankman, Dunn, and Rubin*, 150, 477
- Rubin, S. H. The determination of the buffer alkali in cutaneous blood, 126, 679
- The plasma and red blood cell lipids in persistent (diabetic) lipemia and in transient (alimentary) lipemia, 131, 691
- Rudolph, Guilford G. See *Cahill and Rudolph*, 145, 201
- Rusch, H. P. See *Deutsch, Kline, and Rusch*, 141, 529
- Rusk, Howard A. See *Weichselbaum, Somogyi, and Rusk*, 132, 343
- Rusoff, Irving I. See *Norris, Rusoff, Miller, and Burr*, 139, 199
- 147, 273
- Russell, Jane A., and Wilhelmi, Alfred E. Metabolism of kidney tissue in the adrenalectomized rat, 137, 713
- and —. Glyconeogenesis in kidney tissue of the adrenalectomized rat, 140, 747
- See *Frame, Russell, and Wilhelmi*, 149, 255
- Russell, Mary A. See *Weil and Russell*, 126, 245
- 136, 9
- 144, 307
- Russell, Walter C. See *Nield, Russell, and Zimmerli*, 136, 73
- See *Zimmerli, Nield, and Russell*, 148, 245
- Ryan, Josephine. See *Talbot, Ryan, and Wolfe*, 148, 593

S

- Sahyun, Melville. Crystalline insulin of low zinc content, 138, 487
- Saidel, Leo J. See *Nicolet and Saidel*, 139, 477
- See *Nicolet, Shinn, and Saidel*, 142, 609
- Saier, Eleanor, Warga, Mary, and Grauer, Robert C. Differences in calibration curves of androsterone and dehydroisoandrosterone, 137, 317

Saier, Eleanor—continued:

- , Grauer, Robert C., and Starkey, William F. The chromogenic effect of varying mixtures of androsterone and dehydroisoandrosterone, 148, 213
- Saier, Abraham, and Hughes, James. Determination of chlorides in biological fluids by the use of adsorption indicators. The use of dichlorofluorescein for the volumetric microdetermination of chlorides in zinc filtrates of biological fluids, 129, 273
- , —, and Scudero, Frank. Determination of chlorides in biological fluids by the use of adsorption indicators. The use of eosin for the volumetric microdetermination of chlorides in acetone filtrates of biological fluids, 141, 495
- , —, and Weiss, Ethel. Determination of chlorides in biological fluids by the use of adsorption indicators. A new method for the determination of the plasma volume of blood, 146, 527
- Sakami, Warwick, and Toennies, Gerrit. The investigation of amino acid reactions by methods of non-aqueous titrimetry. II. Differential acetylation of hydroxy groups, and a method for the preparation of the O-acetyl derivatives of hydroxyamino acids, 144, 203
- Salisbury, L. Frank, and Anderson, R. J. Concerning the chemical composition of *Cysticercus fasciolaris*, 129, 505
- Salit, Peter Waldemar. A microcolorimetric method for the determination of potassium in biological materials, 136, 191
- Salmon, C. Lester, Jr. See Abbott and Salmon, 150, 339
- Salter, William T. See Muus, Coons, and Salter, 139, 135
- Salzburg, Peter, and Watson, Cecil James. A study of the supposed conversion of protoporphyrin to coproporphyrin by the liver. II. The porphyrin metabolism of rabbit liver, 139, 593
- Sampson, W. L. See Fieser, Tishler, and Sampson, 137, 659

- Samuels, Leo T. See Koenig, Melzer, Szego, and Samuels, 141, 487
- Sander, Frank V., Jr. The effects of high pressure on the inversion of sucrose and the mutarotation of glucose, 148, 311
- Sandkuhle, J., Kirk, Paul L., and Cunningham, Burris. Quantitative drop analysis. XVII. Gasometric determination of amino nitrogen, 146, 427
- Sando, Charles E. See Riemenschneider, Wheeler, and Sando, 127, 391
- , See Wheeler, Riemenschneider, and Sando, 132, 687
- Sandstrom, W. M. See Lindstrom and Sandstrom, 138, 445
- Sanigar, E. B. See Krejci, Stock, Sanigar, and Kraemer, 142, 785
- Sarett, Herbert P., Perlzweig, William A., and Levy, Edward D. Synthesis and excretion of trigonelline, 135, 483
- , See Perlzweig, Levy, and Sarett, 136, 729
- , A direct method for the determination of N-methyl derivatives of nicotinic acid in urine, 150, 159
- Saum, Arthur M. See Neurath and Saum, 126, 435
- , 128, 347
- Saunders, Felix, Dorfman, Albert, and Koser, Stewart A. The rôle of nicotinamide and related compounds in the metabolism of certain bacteria, 138, 69
- Saunders, Paul R. See Alles, Blohm, and Saunders, 144, 757
- Sawyer, Susan D. See Larson, Chambers, Blatherwick, Ewing, and Sawyer, 129, 701
- , See Blatherwick, Larson, and Sawyer, 133, 643
- , See Blatherwick, Bradshaw, Ewing, Larson, and Sawyer, 134, 549
- , See Larson, Blatherwick, Bradshaw, Ewing, and Sawyer, 136, 1
- , See Blatherwick, Bradshaw, Ewing, and Sawyer, 136, 615
- , See Larson, Blatherwick, Bradshaw, Ewing, and Sawyer, 138, 353
- Sayers, George. See Orten and Sayers, 145, 123

Sayers, George—*continued*:

- , White, Abraham, and Long, C. N. H. Preparation and properties of pituitary adrenotropic hormone, 149, 425
- Schachman, Howard K. An alignment chart for the computation of ultracentrifugation results, 143, 395
- Schachner, H. See Fries, Schachner, and Chaikoff, 144, 59
- , Fries, B. A., and Chaikoff, I. L. The effect of hexoses and pentoses on the formation *in vitro* of phospholipid by brain tissue as measured with radioactive phosphorus, 146, 95
- Schachter, Benjamin, and Marrian, Guy Frederic. The isolation of estrone sulfate from the urine of pregnant mares, 126, 663
- Schaefer, A. E. See Mozon, Schaefer, Lardy, DuBois, and Olson, 132, 785
- See McKibbin, Schaefer, Frost, and Elvehjem, 142, 77
- , McKibbin, J. M., and Elvehjem, C. A. Pantothenic acid deficiency studies in dogs, 143, 321
- , —, and —. Nicotinic acid deficiency studies in dogs, 144, 679
- See McKibbin, Schaefer, Elvehjem, and Hart, 145, 107
- Schales, Otto, and Schales, Selma S. A simple and accurate method for the determination of chloride in biological fluids, 140, 879
- Schales, Selma S. See Schales and Schales, 140, 879
- Scheel, Lester D. See Link, Overman, Sullivan, Huebner, and Scheel, 147, 463
- Scheer, Bradley T. Some features of the metabolism of the carotenoid pigments in the California sea mussel (*Mytilus californianus*), 136, 275
- and Scheer, Marlin Ann Ray. The activation of uricase by cysteine, 150, 359
- Scheer, Marlin Ann Ray. See Scheer and Scheer, 150, 359
- Schein, Arnold. See Block, 128, 181
- Schenck, Jay R. See du Vigneaud, Cohn, Chandler, Schenck, and Simmonds, 140, 625
- Schenck, Jay R.—*continued*:
 - On the origin of β -alanine in the animal body and a microbiological method of β -alanine assay, 149, 111
- , Simmonds, Sofia, Cohn, Mildred, Stevens, Carl M., and du Vigneaud, Vincent. The relation of transmethylation to anserine, 149, 355
- Schlenk, F., and Schlenk, T. A method for the determination of adenosine-5'-phosphoric acid and its homologues, 141, 311
- and Ginrich, Wendell. Nicotinamide-containing nitrilites for *Haemophilus parainfluenzae*, 143, 295
- Identification of the carbohydrate group in the nicotinamide nucleotides, 146, 619
- Schlenk, T. See Schlenk and Schlenk, 141, 311
- Schmidt, Carl L. A. See Tarver and Schmidt, 130, 67
- See Tompkins and Schmidt, 143, 643
- See Tarver and Schmidt, 146, 69
- Schmidt, E. G. An ether extraction method for the determination of urine phenols, 145, 533
- An ether extraction method for the determination of blood phenols, 150, 69
- Schmidt, Gerhard, and Levene, P. A. Ribonucleodepolymerase (the Jones-Dubos enzyme), 126, 423
- , Pickels, E. G., and Levene, P. A. Enzymatic dephosphorylation of desoxyribonucleic acids of various degrees of polymerization, 127, 251
- See Cori, Cori, and Schmidt, 129, 629
- and Thannhauser, S. J. Intestinal phosphatase, 149, 369
- Schmidt, L. H., and Hughes, Hettie B. Studies on bile acid metabolism. I. The fate of cholic acid in the guinea pig, 143, 771
- , —, Green, Mary H., and Cooper, Elizabeth. Studies on bile acid metabolism. II. The action of *Alcaligenes faecalis* on cholic acid, 145, 229

- Schneider, A. K., and Spielman, M. A.**
The synthesis of some methylated fatty acids, 142, 345
- Schneider, H., and Steenbock, H. A.**
low phosphorus diet and the response of rats to vitamin D₂, 128, 159
- , —, and Platz, Blanche R. Essential fatty acids, vitamin B₆, and other factors in the cure of rat acrodynia, 132, 539
- Schneider, Howard A.** See *Folch and Schneider*, 137, 51
- Schneider, W. C.** See *Potter and Schneider*, 142, 543
- and **Potter, V. R.** The assay of animal tissues for respiratory enzymes. II. Succinic dehydrogenase and cytochrome oxidase, 149, 217
- Schoenheimer, Rudolf, and Rittenberg, D.** Studies in protein metabolism. I. General considerations in the application of isotopes to the study of protein metabolism. The normal abundance of nitrogen isotopes in amino acids, 127, 285
- See *Rittenberg, Keston, Rosebury, and Schoenheimer*, 127, 291
- and **Ratner, S.** Studies in protein metabolism. III. Synthesis of amino acids containing isotopic nitrogen, 127, 301
- See *Keston, Rittenberg, and Schoenheimer*, 127, 315
- See *Foster, Schoenheimer, and Rittenberg*, 127, 319
- See *Rittenberg and Schoenheimer*, 127, 329
- , **Ratner, S., and Rittenberg, D.** Studies in protein metabolism. VII. The metabolism of tyrosine, 127, 333
- , **Rittenberg, D., and Keston, Albert S.** Studies in protein metabolism. VIII. The activity of the α -amino group of histidine in animals, 127, 385
- See *Rittenberg, Schoenheimer, and Keston*, 128, 603
- See *Vickery, Pucher, Schoenheimer, and Rittenberg*, 129, 791
- , **Ratner, S., and Rittenberg, D.** Studies in protein metabolism. X. The metabolic activity of body proteins investigated with l(—)-leucine containing two isotopes, 130, 703
- See *Bloch and Schoenheimer*, 131, 111
- See *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 131, 273
- See *Clutton, Schoenheimer, and Rittenberg*, 132, 227
- See *Stetten and Schoenheimer*, 133, 329, 347
- See *Bloch and Schoenheimer*, 133, 633
- See *Bernhard and Schoenheimer*, 133, 707, 713
- See *Ratner, Schoenheimer, and Rittenberg*, 134, 653
- See *Ratner, Rittenberg, Keston, and Schoenheimer*, 134, 665
- See *Bloch and Schoenheimer*, 134, 785
- See *Ratner, Rittenberg, and Schoenheimer*, 135, 99
- See *Moss and Schoenheimer*, 135, 415
- See *Vickery, Pucher, Schoenheimer, and Rittenberg*, 135, 531
- See *Roloff, Ratner, and Schoenheimer*, 136, 561
- See *Bloch, Schoenheimer, and Rittenberg*, 138, 155
- See *Bloch and Schoenheimer*, 138, 167
- See *Weissman and Schoenheimer*, 140, 779
- , **Ratner, S., Rittenberg, D., and Heidelberger, Michael.** The interaction of the blood proteins of the rat with dietary nitrogen, 144, 541
- , —, —, and —. The interaction of antibody protein with dietary nitrogen in actively immunized animals, 144, 545
- See *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*, 144, 555
- See *Ratner, Weissman, and Schoenheimer*, 147, 549

- Scholander, P. F. Method for the determination of the gas content of tissue, 142, 427
- , Irving, Laurence, and Grinnell, S. W. Aerobic and anaerobic changes in seal muscles during diving, 142, 431
- Analyzer for quick estimation of respiratory gases, 146, 159
- , Edwards, G. A., and Irving, Laurence. Improved micrometer burette, 148, 495
- See *Roughton and Scholander*, 148, 541
- and Roughton, F. J. W. Micro gasometric estimation of the blood gases. II. Carbon monoxide, 148, 551
- See *Edwards, Scholander, and Roughton*, 148, 565
- and Roughton, F. J. W. Micro gasometric estimation of the blood gases. IV. Carbon dioxide, 148, 573
- Schousboe, Jan. Use of Krogh's precision syringe for rapid specific gravity measurement of serum as an indicator of protein content, 129, 371
- Schroeder, E. F., and Woodward, Gladys E. A titrimetric modification of the glyoxalase method for the estimation of reduced glutathione, 129, 283
- Schroeder, W. A. See *Zechmeister and Schroeder*, 144, 315
- Schubert, Maxwell P. The combination of cysteine with sugars, 130, 601
- Schuck, Cecilia. See *Purinton and Schuck*, 148, 237
- Schultz, Alfred S. See *Atkin, Schultz, and Frey*, 129, 471
- , Atkin, Lawrence, and Frey, Charles N. The effect of bios on the nitrogen metabolism of yeast. I. Ammonia and carbamide, 135, 267
- , —, and —. A method for the determination of thiamine and certain of its metabolic products in urine, 136, 713
- Schultz, Julius, and Lewis, Howard B. The excretion of volatile selenium compounds after the administration of sodium selenite to white rats, 133, 199
- Schultze, M. O. The effect of deficiencies in copper and iron on the cytochrome oxidase of rat tissues, 129, 729
- Schultze, M. O.—*continued*:
- , Harrer, Carter J., and King, C. G. Studies on the possible carrier rôle of ascorbic acid in animal tissues, 131, 5
- and Kuiken, K. A. The effect of deficiencies in copper and iron on the catalase activity of rat tissues, 137, 727
- The relation of copper to cytochrome oxidase and hematopoietic activity of the bone marrow of rats, 138, 219
- The isolation of protoporphyrin IX from feces of normal and anemic rats, 142, 89
- and Simmons, S. J. The use of radioactive copper in studies on nutritional anemia of rats, 142, 97
- Schumacher, A. E., Heuser, G. F., and Norris, L. C. The complex nature of the alcohol precipitate factor required by the chick, 135, 313
- Schwartz, Bernard M. See *Smith, Winkler, and Schwartz*, 129, 51
- Schwartz, Samuel. See *Watson, Pass, and Schwartz*, 139, 583
- Schweitzer, Carl E. See *Riegel, Schweitzer, and Smith*, 129, 495
- Schwenk, Erwin, Fleischer, Gerhard A., and Tolksdorf, Sibylle. A new method for the preparation of prolactin, 147, 535
- Schwerin, Paula. See *Haurowitz, Schwerin, and Yenson*, 140, 353
- Schwimmer, Sigmund. See *Kies and Schwimmer*, 145, 685
- Scott, D. A., and Mendive, J. R. Observations on carbonic anhydrase, 139, 661
- and —. Chemical observations on carbonic anhydrase, 140, 445
- Crystalline preparation of carbonic anhydrase, 142, 959
- and Fisher, A. M. Carbonic anhydrase, 144, 371
- Scott, D. B. McNair. See *Elliott, Scott, and Libet*, 146, 251
- Scott, E. L. See *McBride, Guest, and Scott*, 139, 943

- Scott, M. L., Randall, F. E., and Hessel, F. H. A modification of the Snell and Strong microbiological method for determining riboflavin, 141, 325
- Scudder, John. See *Smith, Tutkhill, Drew, and Scudder*, 133, 499
- Scudero, Frank. See *Saifer, Hughes, and Scudero*, 141, 495
- Scudi, John V. See *Ratish, Bullowa, Ames, and Scudi*, 128, 279
- , Unna, Klaus, and Antopol, William. A study of the urinary excretion of vitamin B₆ by a colorimetric method, 135, 371
- , Bastedo, W. A., and Webb, T. J. The formation of a vitamin B₆-borate complex, 136, 399
- , On the colorimetric determination of vitamin B₆, 139, 707
- and Buhs, Rudolf P. A colorimetric oxidation-reduction method for the determination of the K vitamins, 141, 451
- , —, and Hood, Dorothy B. The metabolism of vitamin B₆, 142, 323
- and —. On the colorimetric method for the determination of the K vitamins, 143, 665
- and —. Reactions of 2-methyl-1,4-naphthoquinone with whole blood and plasma studied by means of a rapid colorimetric method, 144, 599
- , Conjugated pyridoxine in rice bran concentrates, 145, 637
- and Buhs, Rudolf P. Determination of the tocopherols and the tocopherylquinones by the colorimetric oxidation-reduction method, 146, 1
- Sealock, Robert Ridgely, and Silberstein, Hannah E. The excretion of homogentisic acid and other tyrosine metabolites by the vitamin C-deficient guinea pig, 135, 251
- , Perkinson, Jesse D., Jr., and Basinski, Daniel H. Further analysis of the rôle of ascorbic acid in phenylalanine and tyrosine metabolism, 140, 153
- , The effect of dicarboxylic acid administration upon the excretion of tyrosine metabolites by the guinea pig, 146, 503
- Searle, Donald S., and Reiner, L. The rôle of carbon dioxide in the glucose metabolism of *Trypanosoma lewisi*, 141, 563
- Sebrell, W. H. See *Isbell, Wooley, Butler, and Sebrell*, 139, 499
- Seegers, Walter H., Brinkhous, K. M., Smith, H. P., and Warner, E. D. The purification of thrombin, 126, 91
- , Purification of prothrombin and thrombin: chemical properties of purified preparations, 136, 103
- and Smith, H. P. The purification of prothrombin, 140, 677
- and McGinty, Daniel A. Further purification of thrombin: probable purity of products, 146, 511
- Seeley, Millard G. See *Anderson, Hechtman, and Seeley*, 126, 175
- , See *Anderson, Seeley, Stewart, Redd, and Westerbeke*, 135, 189
- , See *Anderson, Gillette, and Seeley*, 140, 569
- , See *Anderson, Kaster, and Seeley*, 144, 767
- Seibert, Florence B. Removal of the impurities, nucleic acid and polysaccharide, from tuberculin protein, 133, 593
- , See *Spiegel-Adolf, Seibert, and Henny*, 137, 503
- and Watson, Dennis W. Isolation of the polysaccharides and nucleic acid of tuberculin by electrophoresis, 140, 55
- and Nelson, J. Walter. Electrophoretic study of the blood protein response in tuberculosis, 143, 29
- Seifter, S. See *Ecker, Pillemer, Jones, and Seifter*, 135, 347
- Sell, Harold M., and Kremers, Roland E. The methylation of ursolic acid, 126, 501
- Selye, H. See *Karady, Selye, and Browne*, 131, 717
- Sendroy, Julius, Jr. Note on tests for purity of solid silver iodate prepared for chloride determination, 127, 483

Sendroy, Julius, Jr.—continued:

- . Photoelectric microdetermination of chloride in biological fluids, and of iodate and iodine in protein-free solutions, 130, 605
- and Alving, Alf S. Photoelectric microdetermination of iodate and iodine, 142, 159
- . Note on the photoelectric microdetermination of chloride in biological fluids, 142, 171
- . Photoelectric determination of oxalic acid and calcium, and its application to micro- and ultramicro-analysis of serum, 144, 243
- Seraidarian, Krikor. See Kerr, 132, 147
139, 121
140, 77
145, 647
- Setz, Paul. See Thannhauser, Setz, and Benotti, 126, 785
- Sevag, M. G., Smolens, J., and Lackman, David B. The nucleic acid content and distribution in *Streptococcus pyogenes*, 134, 523
- , —, and Stern, Kurt G. Isolation and properties of pigmented heavy particles from *Streptococcus pyogenes*, 139, 925
- and —. Studies on the conjugation of streptococcal nucleoprotein, 140, 833
- , Shelburne, Myrtle, and Ibsen, M. Inhibition of catalase by hydroxylamine and *p*-hydroxylaminobenzene-sulfonamide and the reversal of inhibition by serum, crystalline serum albumin, and hemin, 144, 711
- Seymour, W. B. The preparation of cellophane membranes of graded permeability, 134, 701
- Shaffer, C. Boyd. See Strickler, Shaffer, Wilson, and Strickler, 148, 251
- Shahrokh, Bahman K. A new method for the microdetermination of iodine in certain biological materials, 147, 109
- Shankman, S. Amino acid nutrition of *Lactobacillus arabinosus*, 150, 305

Shankman, S.—continued:

- , Dunn, Max S., and Rubin, Louis B. The analysis of eight amino acids by a microbiological method, 150, 477
- Shantz, Edgar M. See Embree and Shantz, 132, 619
- . See Jensen, Shantz, Embree, Cawley, and Harris, 149, 473
- Sharp, D. G. See Neurath, Cooper, Sharp, Taylor, Beard, and Beard, 140, 293
- , Taylor, A. R., Beard, Dorothy, and Beard, J. W. Electrophoresis of the rabbit papilloma virus protein, 142, 193
- , Cooper, Gerald R., and Neurath, Hans. The electrophoretic properties of serum proteins. I. Normal horse pseudoglobulin GI, 142, 203
- , Hebb, M. H., Taylor, A. R., and Beard, J. W. Progressive boundary spread in electrophoresis of proteins in solution, 142, 217
- , Cooper, Gerald R., Erickson, John O., and Neurath, Hans. The electrophoretic properties of serum proteins. II. Observations on fractions of crystalline horse serum albumin, 144, 139
- . See Huff and Perlzweig, 150, 395
- Sharp, E. A. See Emmett, Kamm, and Sharp, 133, 285
- Sharp, George O., and Berg, Clarence P. The effect of feeding *dl*-lysine monohydrochloride on the storage of liver glycogen and the urinary excretion of acetone bodies, 141, 739
- Shaw, J. C., and Knodt, C. B. The utilization of β -hydroxybutyric acid by the lactating mammary gland, 138, 287
- . A comparison of the acetone body metabolism of the lactating mammary gland of the normal cow with that of the cow with ketosis, 142, 53
- . See Powell and Shaw, 146, 207
- and Petersen, W. E. The utilization of β -hydroxybutyric acid by the perfused lactating mammary gland, 147, 639

- Shaw, J. L. D., and McFarlane, W. D. A critical study of the *p*-dimethylaminobenzaldehyde method for determining tryptophane as contrasted with the glyoxylic acid method, 132, 387
- Shaw, James H. See *Boyer, Shaw, and Phillips*, 143, 417
- Shedlovsky, Theodore. See *Goebel, Shedlovsky, Lavin, and Adams*, 148, 1
- See *Beckman, Hiller, Shedlovsky, and Archibald*, 148, 247
- Shelburne, Myrtle. See *Sevag, Shelburne, and Ibsen*, 144, 711
- Shelesnyak, M. C., and Biskind, M. S. A simple tissue liquefier, 143, 663
- Sheline, G. E., Chaikoff, I. L., Jones, H. B., and Montgomery, M. Laurence. Studies on the metabolism of zinc with the aid of its radioactive isotope. I. The excretion of administered zinc in urine and feces, 147, 409
- , —, —, and —. II. The distribution of administered radioactive zinc in the tissues of mice and dogs, 149, 139
- Shemin, David. See *Herbst and Shemin*, 147, 541
- Sherman, H. C. See *Lanford and Sherman*, 126, 381
- See *Lanford, Campbell, and Sherman*, 137, 627
- See *Conner, Kao, and Sherman*, 139, 835
- Mary Swartz Rose, 140, 687
- See *Little, Thomas, and Sherman*, 148, 441
- Sherman, J. M. See *Niren, Smiley, and Sherman*, 140, 105
- Sherman, W. C. See *Koehn and Sherman*, 132, 527
- Shettles, L. B. See *Hellman, Shettles, and Stran*, 148, 293
- Shils, Maurice E., Day, Harry G., and McCollum, E. V. The effect of thiamine deficiency in rats on the excretion of pyruvic acid and bisulfite-binding substances in the urine, 139, 145
- Shimotori, Nobuko. See *Morgan, Shimotori, and Hendricks*, 134, 761
- See *Morgan and Shimotori*, 147, 189
- and Morgan, Agnes Fay. Mechanism of vitamin D action in dogs shown by radioactive phosphorus, 147, 201
- Shinn, Lawrence E. See *Main and Shinn*, 128, 417
- Shinn, Leo A., and Nicolet, Ben H. The determination of threonine by the use of periodate, 138, 91
- See *Nicolet and Shinn*, 139, 687
- 140, 685
- 142, 139
- See *Nicolet, Shinn, and Saidel*, 142, 609
- Shinowara, George Y., and Brown, J. B. Studies on the chemistry of the fatty acids. VI. The application of crystallization methods to the isolation of arachidonic acid, with a comparison of the properties of this acid prepared by crystallization and by debromination. Observations on the structure of arachidonic acid, 134, 331
- , Jones, Lois M., and Reinhart, Harry L. The estimation of serum inorganic phosphate and "acid" and "alkaline" phosphatase activity, 142, 921
- See *Jones and Shinowara*, 142, 935
- Shorr, Ephraim. See *Barker, Shorr, and Malam*, 129, 33
- See *Mazur and Shorr*, 144, 283
- Shull, G. M., Hutchings, B. L., and Peterson, W. H. A microbiological assay for biotin, 142, 913
- See *Parcek and Shull*, 146, 351
- Shultz, Robert C. See *Sofin, Rosenblum, and Shultz*, 147, 557
- Sideris, C. P., Young, H. Y., and Krauss, B. H. The distribution of uncombined hexosamine in pineapple plants supplied either with ammonium sulfate or calcium nitrate salts, 126, 233
- Sidwell, A. E., Jr. See *Alischul, Sidwell, and Hogness*, 127, 123
- Siegel, Louis. See *Hochberg, Melnick, Siegel, and Oser*, 148, 253
- , Melnick, Daniel, and Oser, Bernard L. Bound pyridoxine (vitamin B₆) in biological materials, 149, 361
- Silber, Robert H., and Unna, Klaus. Studies on the urinary excretion of pantothenic acid, 142, 623

Silber, Robert H.—*continued*:

— and Mushett, Charles W. pH change as a measure of growth of *Lactobacillus casei* in vitamin assays, 146, 271

— See Tennent and Silber, 148, 359

Silberstein, Hannah E. See Sealock and Silberstein, 135, 251

Silverman, M., and Werkman, C. H. The formation of acetylmethylcarbinol from pyruvic acid by a bacterial enzyme preparation, 138, 35

Silverman, Milton, and Evans, E. A., Jr. The effects of spermidine and other polyamines on the growth inhibition of *Escherichia coli* by atabrine, 150, 265

Simmonds, Sofia. See du Vigneaud, Cohn, Chandler, Schenck, and Simmonds, 140, 625

— and du Vigneaud, Vincent. Transmethylation as a metabolic process in man, 146, 685

— See Schenck, Simmonds, Cohn, Stevens, and du Vigneaud, 149, 355

—, Cohn, Mildred, Chandler, Joseph P., and du Vigneaud, Vincent. The utilization of the methyl groups of choline in the biological synthesis of methionine, 149, 519

Simmons, Richard W., and Norris, Earl R. Xanthopterin, the fish anemia factor, 140, 679

Simmons, S. J. See Schultze and Simmons, 142, 97

Simpson, Miriam E. See Fraenkel-Conrat, Simpson, and Evans, 130, 243

— See Li, Simpson, and Evans, 131, 259

— See Fraenkel-Conrat, Fraenkel-Conrat, Simpson, and Evans, 135, 199

— See Fraenkel-Conrat, Simpson, and Evans, 142, 107

— See Li, Simpson, and Evans, 146, 627

— See Marx, Simpson, and Evans, 147, 77

— See Fraenkel-Conrat, Simpson, and Evans, 147, 99

— See Li, Evans, and Simpson, 149, 413

Sinclair, H. M. See Goodhart and Sinclair, 132, 11

Sinclair, Robert Gordon. The rate of turnover of phospholipids in kidney and liver, 134, 71

— The rate of turnover of lecithins and cephalins in the liver, 134, 83

— The exclusion of elaidic acid from the phospholipids of the testes and its uptake by other organs of the rat, 134, 89

— and Fassina, R. J. Effect of diet on glucose absorption by the rat, 141, 509

— and Dolan, Margery. The so called ether-insoluble phospholipids in blood and tissues, 142, 659

Singal, Sam A., and Eckstein, H. C. The lipotropic action of some sulfur-containing amino acids and related substances, 140, 27

Singer, Richard B. See Drabkin and Singer, 129, 739

Sinnhuber, Russell O. See Buitts and Sinnhuber, 139, 963

Sisco, Robert C., Cunningham, Burris, and Kirk, Paul L. Quantitative drop analysis. XIII. The formal titration of amino nitrogen, 139, 1

Sizer, Irwin W. The activation energy of urea hydrolysis catalyzed by soy bean urease, 132, 209

— and Tytell, Alfred A. The activity of crystalline urease as a function of oxidation-reduction potential, 138, 631

— The action of certain oxidants and reductants upon the activity of bovine phosphatase, 145, 405

Skeggs, Leonard. See Bernhart and Skeggs, 147, 19

Slade, H. D., Wood, H. G., Nier, A. O., Hemingway, Allan, and Werkman, C. H. Assimilation of heavy carbon dioxide by heterotrophic bacteria, 143, 133

Sloman, Katherine G. See d'Elseaux, Blackwood, Palmer, and Sloman, 144, 529

Slotin, Louis. See Evans and Slotin, 136, 301, 805

141, 439

Slotin, Louis—continued:

- See *Evans, Slotin, and Vennesland*, 143, 565
- See *Evans, Vennesland, and Slotin*, 147, 771
- Smiley, Karl L.** See *Niven, Smiley, and Sherman*, 140, 105
- See *Niven and Smiley*, 150, 1
- Smith, Arthur H.** See *Orten and Smith*, 128, 101
- and **Meyer, Curtis E.** The influence of diet on the endogenous production of citric acid, 131, 45
- See *Meyer and Smith*, 134, 739
- See *Kuether and Smith*, 137, 647
- and **Meyer, Curtis E.** The influence of thiamine deficiency on citric acid excretion, 139, 227
- Smith, Clement A.** See *Lowry, Smith, and Cohen*, 146, 519
- Smith, E. R.** See *Sullivan, Hess, and Smith*, 130, 741
- Smith, Elizabeth R. B., and Smith, Paul K.** Thermodynamic properties of solutions of amino acids and related substances. IV. The effect of increasing dipolar distance on the activities of aliphatic amino acids in aqueous solution at twenty-five degrees, 132, 47
- See *Smith and Smith*, 132, 57
- and **Smith, Paul K.** Thermodynamic properties of solutions of amino acids and related substances. VI. The activities of some peptides in aqueous solution at twenty-five degrees, 135, 273
- See *Smith, Gorham, and Smith*, 144, 737
- and **Smith, Paul K.** Thermodynamic properties of solutions of amino acids and related substances. VIII. The ionization of glycylglycine, ϵ -aminocaproic acid, and aspartic acid in aqueous solution from one to fifty degrees, 146, 187
- Smith, Emil L., and Bergmann, Max.** The activation of intestinal peptidases by manganese, 138, 789
- See *Vickery, Smith, Hubbell, and Nolan*, 140, 613

- Smith, G. V., Smith, O. W., Huffman, M. N., Thayer, Sidney A., MacCorquodale, D. W., and Doisy, Edward A.** The isolation of dihydrotheelin from human pregnancy urine, 130, 431
- See *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 134, 591
- Smith, H. P.** See *Seegers, Brinkhous, Smith, and Warner*, 126, 91
- and **Owen, Charles A.** The absorption of water-soluble vitamin K without the aid of bile salts, 134, 783
- See *Seegers and Smith*, 140, 677
- Smith, Homer W.** See *Smith, Finkelstein, and Smith*, 135, 231
- Smith, Margaret E., Tuthill, Elizabeth, Drew, Charles R., and Scudder, John.** Studies in blood preservation. Some effects of carbon dioxide, 133, 499
- Smith, O. W.** See *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 130, 431
- See *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 134, 591
- Smith, Paul K., Winkler, Alexander W., and Schwartz, Bernard M.** The distribution of magnesium following the parenteral administration of magnesium sulfate, 129, 51
- See *Smith and Smith*, 132, 47
- and **Smith, Elizabeth R. B.** Thermodynamic properties of solutions of amino acids and related substances. V. The activities of some hydroxy- and N-methylamino acids and proline in aqueous solution at twenty-five degrees, 132, 57
- See *Eisenman, Ott, Smith, and Winkler*, 135, 165
- See *Smith and Smith*, 135, 273
- , **Eisenman, Anna J., and Winkler, Alexander W.** The permeability of human erythrocytes to radioactive chloride, and to bromide and iodide, 141, 555
- , **Gorham, Alice T., and Smith, Elizabeth R. B.** Thermodynamic properties of solutions of amino acids and related substances. VII. The ioniza-

Smith, Paul K.—continued:

- tion of some hydroxyamino acids and proline in aqueous solution from one to fifty degrees, 144, 737
- See *Smith and Smith*, 146, 187
- Smith, Perrin G.** See *Riegel, Schweitzer, and Smith*, 129, 495
- Smith, Rachel M.** See *Marble, Grafflin, and Smith*, 134, 253
- Smith, William K.** See *Campbell, Roberts, Smith, and Link*, 136, 47
- See *Campbell, Smith, Roberts, and Link*, 138, 1
- Smith, Willie W., Finkelstein, Norma, and Smith, Homer W.** Renal excretion of hexitols (sorbitol, mannitol, and dulcitol) and their derivatives (sorbitan, isomannide, and sorbide) and of endogenous creatinine-like chromogen in dog and man, 135, 231
- Smolens, J.** See *Sevag, Smolens, and Lackman*, 134, 523
- See *Sevag, Smolens, and Stern*, 139, 925
- See *Sevag and Smolens*, 140, 833
- Smyth, Elizabeth M.** See *Meyer, Smyth, and Dawson*, 128, 319
- Smythe, C. V.** The utilization of cysteine and cystine by rat liver with the production of hydrogen sulfide, 142, 387
- and **King, C. G.** A study of ascorbic acid synthesis by animal tissue *in vitro*, 142, 529
- See *Drake, Smythe, and King*, 143, 89
- and **Halliday, D.** An enzymatic conversion of radioactive sulfide sulfur to cysteine sulfur, 144, 237
- Snell, Esmond E., Pennington, Derrol, and Williams, Roger J.** The effect of diet on the pantothenic acid content of chick tissues, 133, 559
- See *Pennington, Snell, and Williams*, 135, 213
- See *Stanbery, Snell, and Spies*, 135, 353
- See *Eakin, Snell, and Williams*, 136, 801

Snell, Esmond E.—continued:

- and **Wright, Lemuel D.** A microbiological method for the determination of nicotinic acid, 139, 675
- A specific growth inhibition reversed by pantothenic acid, 139, 975
- See *Eakin, Snell, and Williams*, 140, 535
- Growth inhibition by N-(α , γ -dihydroxy- β , β -dimethylbutyryl) taurine and its reversal by pantothenic acid, 141, 121
- , **Guirard, Beverly M., and Williams, Roger J.** Occurrence in natural products of a physiologically active metabolite of pyridoxine, 143, 519
- Snyder, Fred H., and Tweedy, Wilbur R.** The effects of a magnesium-deficient diet on the serum phosphatase activity in the albino rat, 146, 639
- Snyder, Rebecca, and Katzenelbogen, Solomon.** The distribution of sodium, potassium, calcium, magnesium, inorganic phosphorus, and chloride between the blood serum and cells of normal individuals, 143, 223
- Sobel, Albert E., and Sobel, Bernard A.** Microestimation of calcium in serum, 129, 721
- , **Yuska, Henry, Peters, David D., and Kramer, Benjamin.** The biochemical behavior of lead. I. Influence of calcium, phosphorus, and vitamin D on lead in blood and bone, 132, 239
- See *Kaye, Leibner, and Sobel*, 138, 643
- , **Kraus, George, and Kramer, Benjamin.** The determination of sodium in the presence of phosphates, 140, 501
- , **Hanok, Albert, and Kramer, Benjamin.** Microestimation of potassium in blood serum with the aid of electro-dialysis, 144, 363
- Sobel, Bernard A.** See *Sobel and Sobel*, 129, 721
- Sober, H. A., Lipton, M. A., and Elvehjem, C. A.** The relation of thiamine to citric acid metabolism, 134, 605
- See *Azelrod, Sober, and Elvehjem*, 134, 749

- Sobotka, Harry. See *Mayer and Sobotka*, 143, 695
- Sofin, Louis H., Rosenblum, Harold, and Shultz, Robert C. A color reaction for methionine, 147, 557
- Solkot, Roy. See *Clarke, Solkot, and Corley*, 131, 135
- Solomon, A. K. See *Conant, Cramer, Hastings, Klemperer, Solomon, and Vennesland*, 137, 557
- See *Ball, Tucker, Solomon, and Vennesland*, 140, 119
- , Vennesland, Birgit, Klemperer, Friedrich W., Buchanan, John M., and Hastings, A. Baird. The participation of carbon dioxide in the carbohydrate cycle, 140, 171
- See *Vennesland, Solomon, Buchanan, Cramer, and Hastings*, 142, 371
- See *Vennesland, Solomon, Buchanan, and Hastings*, 142, 379
- Solomon, Rebecca Z., Hald, Pauline M., and Peters, John P. The state of the inorganic components of human red blood cells, 132, 723
- Somogyi, Michael. See *Weichselbaum, Somogyi, and Rusk*, 132, 343
- Interpretation of the saccharogenic action of diastase on the basis of substrate competition, 134, 301
- Blood diastase in health and diabetes, 134, 315
- See *Weichselbaum and Somogyi*, 140, 5
- Effects of insulin upon the production of ketone bodies, 141, 219
- See *Stark and Somogyi*, 142, 579
- and *Weichselbaum, T. E.* Ketone-sparing effect of glucose, 145, 567
- Effects of glucose feeding upon the ketonemia in healthy man, 145, 575
- See *Stark and Somogyi*, 147, 319, 721, 731
- Spaulding, L. Bayard. See *Kuizenga and Spaulding*, 148, 641
- Spector, H., Maass, A. R., Michaud, L., Elvehjem, C. A., and Hart, E. B. The rôle of riboflavin in blood regeneration, 150, 75
- Sperry, Warren M., and Stoyanoff, V. A. The enzymatic synthesis and hydrolysis of cholesterol esters in blood serum, 126, 77
- See *Waelsch and Sperry*, 132, 787
- , *Waelsch, Heinrich, and Stoyanoff, V. A.* Lipid metabolism in brain and other tissues of the rat, 135, 281
- See *Waelsch, Sperry, and Stoyanoff*, 135, 291, 297
- and *Brand, Florence C.* A study of cholesterol esterase in liver and brain, 137, 377
- See *Waelsch, Sperry, and Stoyanoff*, 140, 885
- See *Brand and Sperry*, 141, 545
- , *Brand, Florence C., and Copenhagen, Wilfred M.* The behavior of lipids during autolysis of liver and brain, 144, 297
- and *Brand, Florence C.* The colorimetric determination of cholesterol, 150, 315
- Spiegel-Adolf, Mona, Seibert, Florence B., and Henny, George C. X-ray studies on tuberculin proteins, 137, 503
- Spielman, M. A. See *Schneider and Spielman*, 142, 345
- Spies, Tom D. See *Stanbery, Snell, and Spies*, 135, 353
- See *Axelrod, Spies, and Elvehjem*, 138, 667
- Spilman, Frances. See *Huff and Perlzweig*, 142, 401
- Sprinson, David B. See *Chargaff and Sprinson*, 148, 249
- Stadie, William C., Lukens, Francis D. W., and Zapp, John A., Jr. The effect of insulin upon urea formation, carbohydrate synthesis, and respiration of liver of normal and diabetic animals, 132, 393
- , *Zapp, John A., Jr., and Lukens, Francis D. W.* The effect of insulin upon oxidations of isolated minced muscle tissue, 132, 411
- , —, and —. The effect of insulin upon the ketone metabolism of normal and diabetic cats, 132, 423

Stadie, William C.—*continued*:

- , Zapp, John A., Jr., and Lukens, Francis D. W. Intermediary metabolism in diabetes mellitus. On the synthesis of carbohydrate from fat in the liver and from acetoacetate in the kidney, 137, 63
- , —, and —. Intermediary metabolism in diabetes mellitus. The non-formation of acetic acid and the ratio of ketone body increase to fatty acid decrease in livers of diabetic animals, 137, 75
- and —. The aerobic carbohydrate and lactic acid metabolism of muscle preparations *in vitro*, 148, 669
- and —. The equilibrium relations of *d*-amino acid oxidase, flavin adenine dinucleotide, and amino acids from kinetic data, 150, 165
- See Riggs and Stadie, 150, 463
- Stållberg, Stina. See Stenhagen and Stållberg, 139, 345
- and Stenhagen, Einar. Monolayers of compounds with branched hydrocarbon chains. V. Phthiocerol, 143, 171
- Stållberg-Stenhagen, Stina, and Stenhagen, Einar. Monolayers of compounds with branched hydrocarbon chains. VI. 2-Methyl- and 10-methyl-substituted carboxylic acids of high molecular weight, 148, 685
- Stahmann, Mark Arnold, Huebner, Charles Ferdinand, and Link, Karl Paul. Studies on the hemorrhagic sweet clover disease. V. Identification and synthesis of the hemorrhagic agent, 138, 513
- See Overman, Stahmann, Sullivan, Huebner, Campbell, and Link, 142, 941
- See Overman, Stahmann, and Link, 145, 155
- Stamberg, Olof E., and Bailey, C. H. Action of wheat amylases on soluble starch, 126, 479
- Stamm, Guido. See Stein, Moore, Stamm, Chou, and Bergmann, 143, 121
- Stanbery, Sue R., Snell, Esmond E., and Spies, Tom D. A note on an assay method for pantothenic acid in human blood, 135, 353
- Stanley, W. M. Aucuba mosaic virus protein isolated from diseased, excised tomato roots grown *in vitro*, 126, 125
- The isolation and properties of tobacco ring spot virus, 129, 405
- Isolation of virus from plants recovered from the tobacco ring spot disease, 129, 429
- See Lavin, Loring, and Stanley, 130, 259
- Purification of tomato bushy stunt virus by differential centrifugation, 135, 437
- See Laufer and Stanley, 135, 463
- and Anderson, Thomas F. A study of purified viruses with the electron microscope, 139, 325
- See Anderson and Stanley, 139, 339
- See Knight and Stanley, 141, 29, 39
- See Miller and Stanley, 141, 905
- See Cohen and Stanley, 142, 863
- and Anderson, Thomas F. Electron micrographs of protein molecules, 146, 25
- See Miller and Stanley, 146, 331
- Stare, F. J. See Baumann and Stare, 133, 183
- and Baumann, C. A. The effect of insulin on muscle respiration, 133, 453
- See Feinstein and Stare, 135, 393
- , Lipton, M. A., and Goldinger, J. M. Studies on biological oxidations. XVIII. The citric acid cycle in pigeon muscle respiration, 141, 981
- Stark, Irene E. See Cohen and Stark, 126, 97
- Equilibria in diastatic reactions, 142, 569
- and Somogyi, Michael. Note on the fermentation of maltose and glucose in alkaline solutions, 142, 579
- and —. The quantitative relationship between β -hydroxybutyric acid and acetoacetic acid in blood and urine, 147, 319

Stark, Irene E.—continued:

- and Somogyi, Michael. The effect of glucose feeding upon the quantitative relationship between β -hydroxybutyric acid and acetoacetic acid in blood and urine, 147, 721
- and —. The effect of insulin upon the quantitative relationship between β -hydroxybutyric acid and acetoacetic acid in blood and urine, 147, 731
- Starkey, William F. See *Saier, Grauer, and Starkey*, 148, 213
- Steadman, L. T. A spectrochemical determination of sodium in blood serum, 138, 603
- and Thompson, H. E., Jr. The spectrochemical determination of bismuth in biological material, 138, 611
- , Hodge, Harold Carpenter, and Horn, Helen Wilson. Spectrochemical studies of potassium in bone and tooth substance, 140, 71
- Steenbock, H. See *Schneider and Steenbock*, 128, 159
- See *Schneider, Steenbock, and Platz*, 132, 539
- See *Quackenbush, Steenbock, and Platz*, 145, 163
- See *Quackenbush, Cox, and Steenbock*, 145, 169
- See *Fuhr and Steenbock*, 147, 59, 65, 71
- Steenken, W., Jr. The isolation of purified protein derivatives and carbohydrates from tuberculins and their biological properties, 141, 91
- Stein, Martin H. See *Bueding, Stein, and Wortis*, 137, 793
- 140, 697
- Stein, William H. See *Bergmann and Stein*, 128, 217
- 129, 609
- and Bergmann, Max. Determination of proline in mixtures containing *l*- and *dl*-proline. The proline content of gelatin, 134, 627
- See *Doherty, Stein, and Bergmann*, 135, 487
- , Moore, Stanford, and Bergmann, Max. The isolation of *l*-serine from silk fibroin, 139, 481

Stein, William H.—continued:

- , Moore, Stanford, Stamm, Guido, Chou, Chi-Yuan, and Bergmann, Max. Aromatic sulfonic acids as reagents for amino acids. The preparation of *l*-serine, *l*-alanine, *l*-phenylalanine, and *l*-leucine from protein hydrolysates, 143, 121
- See *Moore and Stein*, 150, 113
- Steinbach, H. Burr. Sodium and potassium in frog muscle, 133, 695
- Steinhardt, Jacinto. The solubility of crystalline pepsin. I. Anomalous dependence of solubility on the solid to solvent ratio, 129, 135
- Catalyzed hydrolysis of amide and peptide bonds in proteins, 141, 995
- Steinitz, Kurt. A colorimetric method for the determination of inulin in blood plasma and urine, 126, 589
- Stekol, Jakob A. Studies on the mercapturic acid synthesis in animals. X. Glutathione in relation to growth of rats on a low casein diet which contained bromobenzene and naphthalene, 127, 131
- XI. The detoxication of benzyl chloride, benzyl alcohol, benzaldehyde, and S-benzylhomocysteine in the rabbit and rat, 128, 199
- XII. The synthesis of N-acetyl-S-*p*-bromobenzyl-*l*-cysteine in the rat from *p*-bromobenzyl bromide, S-*p*-bromobenzyl-*l*-cysteine, and S-*p*-bromobenzylglutathione, 138, 225
- The metabolism of *l*- and *dl*- α -hydroxy- β -benzylthiopropionic and *dl*- α -hydroxy- γ -benzylthiobutyric acids in the rat, 140, 827
- Stenhagen, Einar, and Stållberg, Stina. Monolayers of compounds with branched hydrocarbon chains. IV. Phthioic acid, 139, 345
- See *Stållberg and Stenhagen*, 143, 171
- See *Stållberg-Stenhagen and Stenhagen*, 148, 685
- X-ray study of the hydrocarbon from phthiocerol, 148, 695

- Stephenson, Norman R. The oxidative deamination of diamines by histaminase, 149, 169
- Stern, Adolph, Beach, Eliot F., and Macy, Idie G. Polarographic micro-determination of cystine in protein hydrolysates, 130, 733
- Stern, Kurt G., and Melnick, Joseph L. On the mechanism of cocarboxylase action, 131, 597
- and —. On the mechanism of cocarboxylase action; a reinvestigation, 135, 365
- and —. The photochemical spectrum of the Pasteur enzyme in retina, 139, 301
- See *Sevag, Smolens, and Stern*, 139, 925
- Stetten, DeWitt, Jr., and Schoenheimer, Rudolf. The conversion of palmitic acid into stearic and palmitoleic acids in rats, 133, 329
- and —. The biological relations of the higher aliphatic alcohols to fatty acids, 133, 347
- Biological relationships of choline, ethanolamine, and related compounds, 138, 437
- 140, 143
- Biological synthesis of choline by rats on diets with and without adequate lipotropic methyl, 142, 629
- and Grail, Godfrey F. Effect of dietary choline, ethanolamine, serine, cystine, homocysteine, and guanidoacetic acid on the liver lipids of rats, 144, 175
- The fate of dietary serine in the body of the rat, 144, 501
- Metabolism of a paraffin, 147, 327
- and Grail, Godfrey F. The rates of replacement of depot and liver fatty acids in mice, 148, 509
- Stevens, Carl M. See *Carter and Stevens*, 133, 117
- See *Carter, Handler, and Stevens*, 138, 619
- See *Carter and Stevens*, 138, 627
- See *Carter, Stevens, and Ney*, 139, 247
- Stevens, Carl M.—continued:
- See *Schenck, Simmonds, Cohn, Sterens, and du Vigneaud*, 149, 355
- Stevenson, Elizabeth Simon, and White, Abraham. Influence of iodoacetic acid on sulfur metabolism. Growth studies in the young rat, 134, 709
- Stewart, David Earl. See *Robinson, Stewart, and Luckey*, 137, 283
- Stewart, William T. See *Anderson, Seeley, Stewart, Redd, and Westerbeke*, 135, 189
- Stiehler, Robert D., and Flexner, Louis B. A mechanism of secretion in the chorioid plexus. The conversion of oxidation-reduction energy into work, 126, 603
- See *Flexner and Stiehler*, 126, 619
- Stier, T. J. B. See *Carroll and Stier*, 137, 787
- Stiff, Henry A. See *Fashena and Stiff*, 137, 21
- Stillman, N. See *Perlman, Stillman, and Chaikoff*, 133, 651
- 135, 359
- Stock, A. H. Studies on the hemolytic streptococcus. IV. Further purification and concentration of scarlet fever toxin, 142, 777
- See *Krejci, Stock, Sanigar, and Kraemer*, 142, 785
- Stockholm, M. See *Eiler, Stockholm, and Althausen*, 134, 283
- Stoddard, M. Palmer, and Dunn, Max S. Quantitative investigations of amino acids and peptides. VIII. The solubility and specific rotations of (—)-leucine at twenty-five degrees, 142, 329
- See *Dunn, Frieden, Stoddard, and Brown*, 144, 487
- Stodola, F. H., Lesuk, Alex, and Anderson, R. J. The chemistry of the lipids of tubercle bacilli. LIV. The isolation and properties of mycolic acid, 126, 505
- Stokes, Jacob L. See *Tishler, Stokes, Trenner, and Conn*, 141, 197

Stokes, Jacob L.—continued:

- and Martin, Beverly B. Influence of buffer and glucose in the *Lactobacillus casei* assay for pantothenic acid, 147, 483
- , Larsen, Alma, Woodward, Carl R., Jr., and Foster, Jackson W. A *Neurospora* assay for pyridoxine, 150, 17
- Stokstad, E. L. R., Manning, P. D. V., and Rogers, R. E. The relation between factor U and vitamin B₁₂, 132, 463
- See Almquist, Stokstad, Mecchi, and Manning, 134, 213
- See Almquist, Mecchi, Stokstad, and Manning, 134, 465
- , Almquist, H. J., Mecchi, E., Manning, P. D. V., and Rogers, R. E. The carbohydrate component of the rice factor, 137, 373
- Isolation of a nucleotide essential for the growth of *Lactobacillus casei*, 139, 475
- Some properties of a growth factor for *Lactobacillus casei*, 149, 573
- Stone, William E. Acid-soluble phosphorus compounds and lactic acid in the brain, 135, 43
- Acid-soluble phosphorus compounds of cerebral tissue, 149, 29
- Stoneburg, Charles A. Lipids of the cell nuclei, 129, 189
- See Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead, 139, 897
- Stotz, Elmer. See Horecker, Stotz, and Hogness, 128, 251
- The estimation and distribution of cytochrome oxidase and cytochrome C in rat tissues, 131, 555
- and Bessey, Otto A. The blood lactate-pyruvate relation and its use in experimental thiamine deficiency in pigeons, 143, 625
- See Westerfeld, Stotz, and Berg, 144, 657
- A colorimetric determination of acetaldehyde in blood, 148, 585
- See Westerfeld, Stotz, and Berg, 149, 237

Stotz, Elmer—continued:

- and Raborg, Jane. A colorimetric determination of acetoin and diacetyl, 150, 25
- Stoyanoff, V. A. See Sperry and Stoyanoff, 126, 77
- See Sperry, Waelsch, and Stoyanoff, 135, 281
- See Waelsch, Sperry, and Stoyanoff, 135, 291, 297
- 140, 885
- Strain, Harold H. Carotene. XI. Isolation and detection of α -carotene, and the carotenes of carrot roots and of butter, 127, 191
- and Manning, Winston M. Chlorofucine (chlorophyll γ), a green pigment of diatoms and brown algae, 144, 625
- and — Isomerization of chlorophylls *a* and *b*, 146, 275
- , —, and Hardin, Garrett. Chlorophyll *c* (chlorofucine) of diatoms and dinoflagellates, 148, 655
- Stral, H. M. See Wise, Puck, and Stral, 150, 61
- Stran, Herbert. See Hellman, Shettles, and Stran, 148, 293
- Streef, G. M. Sodium and calcium content of erythrocytes, 129, 661
- Strickler, Evelyn W. See Strickler, Shaffer, Wilson, and Strickler, 148, 251
- Strickler, Herbert S., Shaffer, C. Boyd, Wilson, Donald A., and Strickler, Evelyn W. A new steroid glucuronide from human urine, 148, 251
- Strong, F. M., Feeney, R. E., Moore, Barbara, and Parsons, Helen T. The riboflavin content of blood and urine, 137, 363
- See Feeney and Strong, 142, 961
- Stumpf, P. K. See Green, Knox, and Stumpf, 138, 775
- See Green and Stumpf, 142, 355
- Sturges, Stuart, and Knudson, Arthur. Application of the Schoenheimer-Sperry method to the determination of cholesterol and cholesterol esters in tissues, 126, 543
- See Knudson, Sturges, and Bryan, 128, 721

- Subbarow, Yellapragada. See *György, Poling, and Subbarow*, 132, 789
 —. See *Rane and Subbarow*, 134, 455
 —. See *Alexander and Subbarow*, 135, 341
- Subrahmanyam, V. See *Green, Herbert, and Subrahmanyam*, 135, 795
 138, 327
- de Sütö-Nagy, G. J. See *Mylon, Winternitz, and de Sütö-Nagy*, 143, 21
- Sullivan, M. X. See *Hess and Sullivan*, 128, 93
 —, Hess, W. C., and Smith, E. R. A comparison of colorimetric and polarographic methods in relation to the cystine content of insulin, 130, 741
 — and —. The cystine content of insulin. The acid sensitivity of different samples, 130, 745
 —. See *McCarthy and Sullivan*, 141, 871
 —. See *Hess and Sullivan*, 142, 3
 143, 545
 —, Hess, W. C., and Howard, H. W. The quantitative estimation of both cystine and cysteine in mixtures, 145, 621
 —. See *Hess and Sullivan*, 146, 15, 381
 149, 543
- Sullivan, William R. See *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 142, 941
 —. See *Link, Overman, Sullivan, Huebner, and Scheel*, 147, 463
- Summerson, William H. A simplified test-tube photoelectric colorimeter, and the use of the photoelectric colorimeter in colorimetric analysis, 130, 149
 —. A combination simple manometer and constant volume differential manometer for studies in metabolism, 131, 579
 —. See *Barker and Summerson*, 138, 535
- Sumner, James B., and Dounce, Alexander L. Catalase. II, 127, 439
 — and Sumner, Robert J. The coupled oxidation of carotene and fat by carotene oxidase, 134, 531
- Sumner, James B.—continued:
 —, Dounce, Alexander L., and Frampton, Vernon L. Catalase. III, 136, 343
- Sumner, Robert J. See *Sumner and Sumner*, 134, 531
 —. Lipid oxidase studies. II. The specificity of the enzyme lipoxidase, 146, 211
 —. III. The relation between carotene oxidation and the enzymic peroxidation of unsaturated fats, 146, 215
- Sunderman, F. William. Studies in serum electrolytes. XIII. Estimation of total base in serum, 143, 185
- Supplee, G. C., Jensen, O. G., Bender, R. C., and Kahlenberg, O. J. Factors affecting the riboflavin content of the liver, 144, 79
- Sure, Barnett, and DeWitt, James B. The oxygen uptake of tissues in vitamin deficiencies, 126, 287
 —, Theis, R. M., and Harrelson, R. T. Vitamin interrelationships. I. Influence of avitaminosis on ascorbic acid content of various tissues and endocrines, 129, 245
 — and Ford, Zenas W., Jr. Vitamin interrelationships. II. Thiamine and riboflavin interrelationships in metabolism, 146, 241
- Sutherland, Earl W., Colowick, Sidney P., and Cori, Carl F. The enzymatic conversion of glucose-6-phosphate to glycogen, 140, 309
 —. See *Colowick and Sutherland*, 144, 423
- Sutton, T. S., Kaeser, Harold E., and Hansard, S. L. Some factors affecting the synthesis of ascorbic acid in the albino rat, 144, 183
- Svensson, Harry. See *Blüx, Tiselius, and Svensson*, 137, 485
 —. Fractionation of serum with ammonium sulfate and water dialysis, studied by electrophoresis, 139, 805
- Svirbely, Joseph L. Vitamin C studies in the rat. The effect of copper and various organic substances, 131, 233
- Swanson, Marjorie. See *Arton and Swanson*, 148, 633

- Swendseid, Marian E., Barnes, Richard H., Hemingway, Allan, and Nier, A. O. The formation of acetone bodies from acetic acid, 142, 47
- Swingle, Karl F. See Axelrod, Swingle, and Elvehjem, 140, 931
145, 297
- , Axelrod, A. E., and Elvehjem, C. A. The mechanism of the effect of calcium salts on the succinoxidase system, 145, 581
- , See Axelrod, Gross, Bosse, and Swingle, 148, 721
- Szego, Clara M. See Koenig, Melzer, Szego, and Samuels, 141, 487

T

- Tabor, Herbert, and Hastings, A. Baird. The ionization constant of secondary magnesium phosphate, 148, 627
- Taffel, Max. See Darrow, Harrison, and Taffel, 130, 487
- Talbot, Nathan B. See Langstroth and Talbot, 128, 759
129, 759
- , See Langstroth, Talbot, and Fine-man, 130, 585
- , Lowry, Oliver H., and Astwood, E. B. Influence of estrogen on the electrolyte pattern of the immature rat uterus, 132, 1
- , Butler, Allan M., and MacLachlan, E. The colorimetric assay of total, α -, and β -17-ketosteroids in extracts of human urine, 132, 595
- , Wolfe, J. K., MacLachlan, E. A., Karush, F., and Butler, Allan M. The colorimetric assay of weakly phenolic ketones, "estrone," in extracts of human urine, 134, 319
- , Butler, Allan M., MacLachlan, E. A., and Jones, R. N. Definition and elimination of certain errors in the hydrolysis, extraction, and spectrochemical assay of α - and β -neutral urinary 17-ketosteroids, 136, 365
- , Wolfe, John K., MacLachlan, E. A., and Berman, R. A. Chromatographic separation and colorimetric determination of alcoholic and non-alcoholic
- Talbot, Nathan B.—continued:
17-ketosteroids in extracts of human urine, 139, 521
- , Berman, R. A., and MacLachlan, E. A. Elimination of errors in the colorimetric assay of neutral urinary 17-ketosteroids by means of a color correction equation, 143, 211
- , Ryan, Josephine, and Wolfe, John K. The determination of sodium dehydroisoandrosterone sulfate in water or urine, 148, 593
- Talbott, John H. See Consolazio and Talbott, 126, 55
132, 753
- Tannenbaum, Albert. See Cohn, Tannenbaum, Thalhimer, and Hastings, 128, 109
- Tarver, Harold, and Schmidt, Carl L. A. The conversion of methionine to cystine: experiments with radioactive sulfur, 130, 67
- and —. Radioactive sulfur studies. I. Synthesis of methionine. II. Conversion of methionine sulfur to taurine sulfur in dogs and rats. III. Distribution of sulfur* in the proteins of animals fed sulfur* or methionine*. IV. Experiments *in vitro* with sulfur* and hydrogen sulfide*, 146, 69
- Tatum, E. L., and Haagen-Smit, A. J. Identification of *Drosophila* v^+ hormone of bacterial origin, 140, 575
- Taurog, Alvin. See Fishler, Taurog, Perlman, and Chaikoff, 141, 809
- , Chaikoff, I. L., and Perlman, I. The effect of anaerobic conditions and respiratory inhibitors on the *in vitro* phospholipid formation in liver and kidney with radioactive phosphorus as indicator, 145, 281
- Taylor, A. R. See Neurath, Cooper, Sharp, Taylor, Beard, and Beard, 140, 293
- , See Sharp, Taylor, Beard, and Beard, 142, 193
- , See Sharp, Hebb, Taylor, and Beard, 142, 217
- Taylor, Henry Longstreet, and Keys, Ancel. Fractionation of normal serum

- proteins by the electrophoretic and sodium sulfate methods, 148, 379
- Taylor, J. D.** See *MacLachlan, Hodge, Moor, Welch, Truax, and Taylor*, 143, 473
- Taylor, John Fuller, and Hastings, A. Baird.** Oxidation-reduction potentials of the methemoglobin-hemoglobin system, 131, 649
- See *Clark, Taylor, Davies, and Vestling*, 135, 543
- **Metalloporphyrins. II. Cobalt and manganese mesoporphyrins in coordination with nitrogenous bases**, 135, 569
- and **Hastings, A. Baird.** The equilibrium between oxygen and hemoglobin in concentrated urea solution, 144, 1
- **Oxidation-reduction potentials of the methemoglobin-hemoglobin system in concentrated urea solution**, 144, 7
- and **Morgan, Vincent E.** Oxidation-reduction potentials of the metmyoglobin-myoglobin system, 144, 15
- Teague, D. Maxwell.** See *Erickson, Avrin, Teague, and Williams*, 135, 671
- See *Beach, Bernstein, Hoffman, Teague, and Macy*, 139, 57
- See *Beach and Teague*, 142, 277
- Templeton, R. D.** See *Tweedy, Templeton, Patras, McJunkin, and McNamara*, 128, 407
- Tenenbaum, Leon E., and Jensen, H.** Catecholase (tyrosinase): an improved method of preparation, 145, 293
- and —. Catecholase (tyrosinase): reversible inactivation and reactivation, 147, 27
- See *Jensen and Tenenbaum*, 147, 737
- Tenery, Robert Mayo, and Anderson, Carl E.** A photoelectric method for the microdetermination of potassium in blood plasma by the chloroplatinate precipitation, 135, 659
- Tennent, David M., and Silber, Robert H.** The excretion of ascorbic acid, thiamine, riboflavin, and pantothenic acid in sweat, 148, 359
- Teply, L. J.** See *Briggs, Luckey, Teply, Elvehjem, and Hart*, 148, 517
- Thalhimer, William.** See *Cohn, Tanenbaum, Thalhimer, and Hastings*, 128, 109
- Thannhauser, S. J., Setz, Paul, and Benotti, Joseph.** The composition of sphingomyelin from stromata of red blood cells, 126, 785
- , **Benotti, Joseph, and Reinstein, Harold.** Studies on animal lipids. XIV. The determination of lecithin, cephalin, and sphingomyelin in body fluids and tissues; with analyses of normal human sera, 129, 709
- , —, **Walcott, Alexander, and Reinstein, Harold.** Studies on animal lipids. XV. The lecithin, cephalin, and sphingomyelin content of normal human organs, 129, 717
- and **Reichel, Max.** Studies on animal lipids. XVI. The occurrence of sphingomyelin as a mixture of sphingomyelin fatty acid ester and free sphingomyelin, demonstrated by enzymatic hydrolysis and mild saponification, 135, 1
- See *Reichel and Thannhauser*, 135, 15
- See *Schmidt and Thannhauser*, 149, 369
- Thayer, Sidney A.** See *Westerfeld, Thayer, MacCorquodale, and Doisy*, 126, 181
- See *Westerfeld, MacCorquodale, Thayer, and Doisy*, 126, 195
- See *Binkley, MacCorquodale, Thayer, and Doisy*, 130, 219
- See *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 130, 431
- See *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 130, 433
- See *McKee, Binkley, Thayer, MacCorquodale, and Doisy*, 131, 327
- See *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 131, 357

Thayer, Sidney A.—continued:

- See *Huffman, Thayer, and Doisy*,
133, 567
- See *Binkley, McKee, Thayer, and Doisy*,
133, 721
- See *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*,
134, 591
- See *Doisy, Huffman, Thayer, and Doisy*,
138, 283
- Theis, Edwin R., and Jacoby, T. F.** The acid-base-binding capacity of collagen,
146, 163
- and —. The acid- and base-binding capacity of heat-denatured collagen,
148, 105
- and —. The acid-, base-, and salt-binding capacity of salt-denatured collagen,
148, 603
- Theis, R. M.** See *Sure, Theis, and Harrelson*,
129, 245
- Thomas, A. W.** See *Little, Thomas, and Sherman*,
148, 441
- Thomas, Byron H.** See *Eck and Thomas*,
128, 257, 267
- Thomas, Isabell.** See *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*,
148, 321
- Thomas, James M.** See *Bina, Thomas, and Brown*,
148, 111
- Thomas, Lloyd E., Ingalls, Janet K., and Luck, James Murray.** The determination of arginine in the presence of other amino acids by means of the Sakaguchi reaction,
129, 263
- See *Haddock and Thomas*,
144, 691
- Thompson, H. E., Jr.** See *Steadman and Thompson*,
138, 611
- Thompson, Marvin R.** See *Martin, Rennebaum, and Thompson*,
139, 871
- Thompson, Roy C.** See *Mitchell, Isbell, and Thompson*,
147, 485
- , **Isbell, Edith R., and Mitchell, Herschel K.** A microbiological assay method for *p*-aminobenzoic acid,
148, 281
- Thomson, K. B.** See *Duffendack, Thomson, Lee, and Koppius*,
126, 1

- Thorn, George W.** See *Engel, Thorn, and Lewis*,
137, 205
- Tidwell, Herbert C.** See *Treadwell, King, Bebb, and Tidwell*,
143, 203
- See *Treadwell, Tidwell, and Grafa*,
149, 209
- Tietzman, Josephine E.** See *Doherty, Tietzman, and Bergmann*,
147, 617
- Tipson, R. Stuart, and Levene, P. A.** On the union of the nucleotides in ribonucleic acid,
127, 105
- , **Christman, Clarence C., and Levene, P. A.** The structure of the aldobionic acid from flaxseed mucilage,
128, 609
- and **Levene, P. A.** Partially O-methylated hexitols. II. Synthesis of 1,2,3,5,6-O-pentamethyl dulcitol,
129, 575
- See *Raymond, Tipson, and Levene*,
130, 47
- A note on the action of silver salts of organic acids on bromoacetyl sugars. A new form of tetraacetyl *l*-rhamnose,
130, 55
- and **Levene, P. A.** Partially O-methylated hexitols. III. Synthesis of 1,3,4,5-tetramethyl *l*-rhamnitol,
130, 235
- Tiselius, Arne.** See *Blix, Tiselius, and Svensson*,
137, 485
- Tishler, Max.** See *Fieser, Tishler, and Sampson*,
137, 659
- and **Evans, Herbert M.** Vitamin E activities of some compounds related to α -tocopherol,
139, 241
- , **Stokes, J. L., Trenner, N. R., and Conn, John B.** Some properties of gramicidin,
141, 197
- See *Waksman and Tishler*,
142, 519
- Titus, Harry W.** See *Riemenschneider, Ellis, and Titus*,
126, 255
- Todd, W. R., Vreeland, Johanna, Myers, Jane, and West, Edward S.** A rapid micromethod for the quantitative estimation of sugar alcohols,
127, 269
- , **Myers, Jane, and West, Edward S.** On the metabolism of sorbitol and mannitol,
127, 275
- Toennies, Gerrit, and Kolb, Joseph J.** Methionine studies. I. The reaction

Toennies, Gertrud—continued:

- of methionine and other amino acids with mercuric chloride, 126, 367
- and Kolb, Joseph J. II. *dl*-Methionine sulfoxide, 128, 399
- and Callan, Thomas P. Methionine studies. III. A comparison of oxidative reactions of methionine, cysteine, and cystine. Determination of methionine by hydrogen peroxide oxidation, 129, 481
- See Kolb and Toennies, 131, 401
- Sulfonium reactions of methionine and their possible metabolic significance, 132, 455
- and Kolb, Joseph J. Methionine studies. VI. *dl*-Methionine sulfone, 140, 131
- The optical rotation of *l*-cystine. A correction, 143, 75
- See Kolb and Toennies, 144, 193
- See Sakami and Toennies, 144, 203
- and Kolb, Joseph J. The investigation of amino acid reactions by methods of non-aqueous titrimetry. III. The determination of hydroxy (and analogous) groups in amino acids, 144, 219
- The oxidative conversion of casein into protein free of methionine and tryptophane, 145, 667
- See Bennett and Toennies, 145, 671
- Tolksdorf, Sibylle. See Jensen and Tolksdorf, 132, 519
- See Jensen, Tolksdorf, and Bamman, 135, 791
- See Schwenk, Fleischer, and Tolksdorf, 147, 535
- Tomarelli, Rudolph. See György, Rose, and Tomarelli, 144, 169
- See György and Tomarelli, 147, 515
- Tomkins, F. S. See Ewing, Tomkins, and Kamm, 147, 233
- Tompkins, Edward R., and Kirk, Paul L. Quantitative drop analysis. XVI. An improved diffusion method for total nitrogen, 142, 477
- Tompkins, Paul C., and Schmidt, Carl L. A polarographic characterization of nicotinic acid and related compounds. I. Pyridine and nicotinic acid, 143, 643
- Torrance, Calvin C. Diphtherial intoxication and vitamin C content of the suprarenals of guinea pigs, 132, 575
- Totter, John R., and Berg, Clarence P. The influence of optical isomerism on the utilization of tryptophane, histidine, and lysine for growth in the mouse, 127, 375
- See Borchers, Totter, and Berg, 142, 697
- and Day, Paul L. Xanthopterin in the treatment of leucopenia and weight loss in rats fed succinylsulfathiazole, 147, 257
- Tracy, Ann H. See Oncley, Ross, and Tracy, 141, 797
- and Ross, William F. Carbon suboxide and proteins. V. Further study of the nature of the reaction, 142, 871
- See Ross and Tracy, 145, 19
- and Ross, William F. Carbon suboxide and proteins. VII. Malonyl pepsin, 146, 63
- Tragerman, L. J. See Halliday, Deuel, Tragerman, and Ward, 132, 171
- Treadwell, C. R., and Eckstein, H. C. The composition of the tissue lipids of the Virginia white-tailed deer (*Odocoileus virginianus borealis*), 128, 373
- See Tucker, Treadwell, and Eckstein, 135, 85
- and Eckstein, H. C. Sterol metabolism in young white rats. IV. The effect of high and low fat diets on the cholesterol metabolism of four generations of white rats, 140, 35
- , Groothuis, Marjorie, and Eckstein, H. C. The influence of supplementary casein, cystine, and methionine on liver lipid content, 142, 653
- , King, W. C., Bebb, K. C., and Tidwell, Herbert C. Fatty livers and glucose tolerance in the white rat, 143, 203
- , Tidwell, Herbert C., and Grafa, Barney G., Jr. Liver glycogen and lipids in fasted and glucose-fed rats, 149, 209

- Treffers, Henry P. See *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*, 144, 555
- Trenner, N. R., and Bacher, F. A. A quantitative reduction-oxidation method for the estimation of vitamin K₁ and associated quinones and naphthoquinones, 137, 745
- See *Tishler, Stokes, Trenner, and Conn*, 141, 197
- Trevorrow, Virginia. Studies on the nature of the iodine in blood, 127, 737
- Tria, Eusebio. Anticatalase, 129, 377
- Troesch, E. Elizabeth, and Norris, Earl R. A micro blood esterase determination applied to studies of rats bearing adenocarcinoma, 132, 553
- Truax, Frederick L. See *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 143, 473
- Truhlar, Joseph, Dreker, Leon, McGuire, Grace, and Falk, K. George. Studies on enzyme action. LI. The phosphatase actions of tissues of normal and rachitic rats, 127, 345
- Tucker, Helen F., and Eckstein, Henry C. The effect of supplementary lysine, methionine, and cystine on the production of fatty livers by high fat diets containing gliadin, 126, 117
- , Treadwell, C. R., and Eckstein, H. C. The effect of supplementary cystine and methionine on the production of fatty livers by rats on high fat diets containing casein or edestin, 135, 85
- and Ball, Eric G. The activity of carbonic anhydrase in relation to the secretion and composition of pancreatic juice, 139, 71
- See *Ball, Tucker, Solomon, and Vennesland*, 140, 119
- Tucker, I. W. See *Mallack and Tucker*, 132, 663
- Tulane, Victor J. See *Wilkerson and Tulane*, 129, 477
- Tully, R. H., 3rd. See *Musulin, Tully, Longenecker, and King*, 129, 437
- See *Longenecker, Musulin, Tully, and King*, 129, 445
- Turner, C. W. See *Reineke, Peterson, and Turner*, 128, 1
- See *Reineke, Williamson, and Turner*, 138, 83
143, 285
147, 115
- See *Reineke and Turner*, 149, 555, 563
- Turner, D. L., and Miller, F. R. The preparation of concentrates of specific substances from urine and feces in leucemia, 147, 573
- Turner, Richard B. See *Ross and Turner*, 139, 603
- Turner, William J., Kress, Bernard H., and Harrison, Norman B. Determination of dihydroxyacetone in blood, 148, 581
- Tuthill, Elizabeth. See *Smith, Tuthill, Drew, and Scudder*, 133, 499
- Tweedy, Wilbur R., Templeton, R. D., Patras, Mary C., McJunkin, F. A., and McNamara, E. W. Studies on the effects of calciferol in the thyroparathyroidectomized-nephrectomized rat, 128, 407
- See *Snyder and Tweedy*, 146, 639
- Tytell, Alfred A. See *Sizer and Tytell*, 138, 631
- See *Gould, Tytell, and Jaffe*, 146, 219

U

- Uber, Fred M., and Verbrugge, Frank. Photochemistry and absorption spectroscopy of the pyrimidine component of vitamin B₁, 134, 273
- and —. Photochemistry of the thiazole component of vitamin B₁, 136, 81
- and Ells, Victor R. The ultraviolet absorption spectrum of crystalline ribonuclease, 141, 229
- and McLaren, A. D. A photochemical yield for the inactivation of crystalline trypsin, 141, 231
- Umberger, Charles J. See *Gettler and Umberger*, 143, 633
- Umbreit, W. W. *See *O' Kane and Umbreit*, 142, 25

Umbreit, W. W.—continued:

- See *LePage and Umbreit*, 147, 263
148, 255
- Underkofler, L. A. See *Lampen, Underkofler, and Peterson*, 146, 277
- Unna, Klaus. See *Scudi, Unna, and Antopol*, 135, 371
- See *Silber and Unna*, 142, 623
- Utter, M. F., and Werkman, C. H. Effect of metal ions on the reactions of phosphopyruvate by *Escherichia coli*, 146, 289

V

- Van Bruggen, J. T. See *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 147, 47
- , Reithel, F. J., Cain, C. K., Katzman, Philip A., Doisy, Edward A., Muir, R. D., Roberts, E. C., Gaby, W. L., Homan, D. M., and Jones, L. R. Penicillin B: preparation, purification, and mode of action, 148, 365
- Vandenbelt, J. M. See *Ewing, Vandenbelt, and Kamm*, 131, 345
- See *Bird, Vandenbelt, and Emmett*, 142, 317
- Van Duyne, F. O. A method for the determination *in vitro* of riboflavin in tissues, 139, 207
- Van Huysen, Grant. See *Hodge, Van Huysen, Bonner, and Van Voorhis*, 138, 451
- Van Slyke, Donald D. See *McCarthy and Van Slyke*, 128, 567
- See *Folch and Van Slyke*, 129, 539
- Determination of solubilities of gases in liquids with use of the Van Slyke-Neill manometric apparatus for both saturation and analysis, 130, 545
- , Hiller, Alma, MacFadyen, Douglas A., Hastings, A. Baird, and Klemperer, Friedrich W. On hydroxylysine, 133, 287
- Glenn Ernest Cullen, preceding, 134, 467
- and Folch, Jordi. Manometric carbon determination, 136, 509

Van Slyke, Donald D.—continued:

- See *Jacobs and Van Slyke*, 141, 1
- , Dillon, Robert T., MacFadyen, Douglas A., and Hamilton, Paul. Gasometric determination of carboxyl groups in free amino acids, 141, 627
- , MacFadyen, Douglas A., and Hamilton, Paul. Determination of free amino acids by titration of the carbon dioxide formed in the reaction with ninhydrin, 141, 671
- , Hiller, Alma, and MacFadyen, Douglas A. The determination of hydroxylysine in proteins, 141, 681
- and Kreysa, Frank J. Microdetermination of calcium by precipitation as picrolonate and estimation of the precipitated carbon by manometric combustion, 142, 765
- See *Klemperer, Hastings, and Van Slyke*, 143, 433
- , Hiller, Alma, and Dillon, Robert T. Solubilities and compositions of the phospho-12-tungstates of the diamino acids and of proline, glycine, and tryptophane, 146, 137
- See *MacFadyen and Van Slyke*, 149, 527
- See *Hamilton and Van Slyke*, 150, 231
- , MacFadyen, Douglas A., and Hamilton, Paul B. The gasometric determination of amino acids in urine by the ninhydrin-carbon dioxide method, 150, 251
- and Hamilton, Paul B. The synthesis and properties of ninhydrin ureide, 150, 471
- , Phillips, Robert A., Hamilton, Paul B., Archibald, Reginald M., Fletcher, Palmer H., and Hiller, Alma. Glutamine as source material of urinary ammonia, 150, 481
- Van Voorhis, Stanley N. See *Volker, Hodge, Wilson, and Van Voorhis*, 134, 543
- See *Hodge, Van Huysen, Bonner, and Van Voorhis*, 138, 451
- Vassel, Bruno. A colorimetric micro-method for the estimation of cystine and cysteine, 140, 233

- Velick, Sidney F., White, Julius, and Lewis, Howard B. The synthesis of dicholylcystine and cholyleysteic acid, 127, 477
- Vennesland, Birgit. See Conant, Cramer, Hastings, Klemperer, Solomon, and Vennesland, 137, 557
- See Ball, Tucker, Solomon, and Vennesland, 140, 119
- See Solomon, Vennesland, Klemperer, Buchanan, and Hastings, 140, 171
- See Green, Westerfeld, Vennesland, and Knox, 140, 683
- , Solomon, A. K., Buchanan, John M., Cramer, Richard D., and Hastings, A. Baird. Metabolism of lactic acid containing radioactive carbon in the α or β position, 142, 371
- , —, —, and Hastings, A. Baird. Glycogen formation from glucose in the presence of radioactive carbon dioxide, 142, 379
- See Evans, Slotin, and Vennesland, 143, 565
- See Green, Westerfeld, Vennesland, and Knox, 145, 69
- See Evans, Vennesland, and Slotin, 147, 771
- Venning, Eleanor H. Further studies on the estimation of small amounts of sodium pregnanediol glucuronide in urine, 126, 595
- , Hoffman, M. M., and Browne, J. S. L. Isolation of androsterone sulfate, 146, 369
- , —, and —. The life-maintaining and gluconeogenic properties of the cortin-like material excreted postoperatively, 148, 455
- Verbrugge, Frank. See Uber and Verbrugge, 134, 273
- 136, 81
- The inactivation of trypsin by ultraviolet radiation, 149, 405
- Vestling, Carl S. See Clark, Taylor, Davies, and Vestling, 135, 543
- Metalloporphyrins. IV. Coordination of iron copro- and etioporphyrins with nitrogenous bases, 135, 623
- Vestling, Carl S.—*continued*:
- The reduction of methemoglobin by ascorbic acid, 143, 439
- and Warner, Donald T. The isoelectric points of threonine and some related compounds, 144, 687
- Vickery, Hubert Bradford. See Pucher, Wakeman, and Vickery, 126, 43
- and Pucher, George W. The loss of carbon from excised rhubarb leaves during culture, 128, 685
- and —. The metabolism of amides in green plants. III. The mechanism of amide synthesis, 128, 703
- , —, Schoenheimer, Rudolf, and Rittenberg, D. The metabolism of nitrogen in the leaves of the buckwheat plant, 129, 791
- The determination of arginine by means of flavianic acid, 132, 325
- , Pucher, George W., Schoenheimer, Rudolf, and Rittenberg, D. The assimilation of ammonia nitrogen by the tobacco plant: a preliminary study with isotopic nitrogen, 135, 531
- , Smith, Emil L., Hubbell, Rebecca B., and Nolan, Laurence S. Cucurbit seed globulins. I. Amino acid composition and preliminary tests of nutritive value, 140, 613
- The preparation of histidine by means of 3,4-dichlorobenzenesulfonic acid, 143, 77
- The histidine content of the hemoglobin of man and of the horse and sheep, determined with the aid of 3,4-dichlorobenzenesulfonic acid, 144, 719
- , Pucher, George W., and Deuber, Carl G. The preparation of asparagine, 145, 45
- See Pucher and Vickery, 145, 525
- and Pucher, George W. Amide metabolism in etiolated seedlings. I. Asparagine and glutamine formation in *Lupinus angustifolius*, *Vicia atropurpurea*, and *Cucurbita pepo*, 150, 197
- Viergiver, Ellenmae. See Allen and Viergiver, 141, 837

Viergiver, Ellenmae—continued:

- See Woolf, Viergiver, and Allen,
146, 323
- du Vigneaud, Vincent, Patterson, Wilbur
I., and Hunt, Madison. Opening of
the ring of the thiolactone of homo-
cysteine, 126, 217
- See Hunt and du Vigneaud,
127, 43, 727
- See Kies, Dyer, Wood, and du
Vigneaud, 128, 207
- , Wood, John L., and Irish, Oliver J.
The optical inversion of the benzyl
derivatives of *d*-cysteine and *d*-homo-
cysteine *in vivo*, 129, 171
- See Wood and du Vigneaud,
130, 109
- , Dyer, Helen M., and Kies, Marian
Wood. A relationship between the
nature of the vitamin B complex
supplement and the ability of homo-
cystine to replace methionine in the
diet, 130, 325
- , Chandler, Joseph P., Moyer, A. W.,
and Keppel, Dorothy M. The effect of
choline on the ability of homocystine
to replace methionine in the diet,
131, 57
- See Wood and du Vigneaud,
131, 267
- , Cohn, Mildred, Brown, George
Bosworth, Irish, Oliver J., Schoen-
heimer, Rudolf, and Rittenberg, D.
A study of the inversion of *d*-phenyl-
aminobutyric acid and the acetylation
of *l*-phenylaminobutyric acid by means
of the isotopes of nitrogen and hy-
drogen, 131, 273
- , Miller, Gail Lorenz, and Rodden,
Clement J. On the question of the
presence of methionine in insulin,
131, 631
- See Wood and du Vigneaud,
134, 413
- , Chandler, Joseph P., Cohn, Mildred,
and Brown, George Bosworth. The
transfer of the methyl group from
methionine to choline and creatine,
134, 787
- See Chandler and du Vigneaud,
135, 223

du Vigneaud, Vincent—continued:

- See Brown and du Vigneaud,
137, 611
- See Cohn, Irving, and du Vigneaud,
137, 635
- and Brown, George Bosworth. The
synthesis of the new sulfur-containing
amino acid (lanthionine) isolated from
sodium carbonate-treated wool,
138, 151
- , Wood, John L., and Binkley, Francis.
Acetylation *in vivo* of *p*-bromophenyl-
d-cysteine, 138, 369
- , Chandler, Joseph P., and Moyer,
A. W. The inability of creatine and
creatinine to enter into transmethyla-
tion *in vivo*, 139, 917
- See Miller, Behrens, and du Vi-
gneaud, 140, 411
- , Cohn, Mildred, Chandler, Joseph P.,
Schenck, Jay R., and Simmonds,
Sofia. The utilization of the methyl
group of methionine in the biological
synthesis of choline and creatine,
140, 625
- , Hofmann, Klaus, Melville, Donald
B., and György, Paul. Isolation of
biotin (vitamin H) from liver,
140, 643
- , —, and Rachele, Julian R. The
preparation of free crystalline biotin,
140, 763
- See Brown and du Vigneaud,
140, 767
- See Hofmann, Melville, and du
Vigneaud, 141, 85
- , Brown, George Bosworth, and
Bonsnes, Roy W. The formation of
lanthionine on treatment of insulin
with dilute alkali, 141, 707
- See Melville, Hofmann, Hague, and
du Vigneaud, 142, 615
- , Brown, George Bosworth, and
Chandler, Joseph P. The synthesis of
ll-S-(β -amino- β -carboxyethyl)homo-
cysteine and the replacement by it of
cystine in the diet, 143, 59
- See Moyer and du Vigneaud,
143, 373

du Vigneaud, Vincent—continued:

- See *Binkley, Anslow, and du Vigneaud*, 143, 559
- See *Binkley and du Vigneaud*, 144, 507
- See *Hofmann, Melville, and du Vigneaud*, 144, 513
- See *Melville, Hofmann, and du Vigneaud*, 145, 101
- See *Kilmer, Armstrong, Brown, and du Vigneaud*, 145, 495
- See *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 145, 503
- , *Melville, Donald B., Folkers, Karl, Wolf, Donald E., Mazingo, Ralph, Keresztesy, John C., and Harris, Stanton A.* The structure of biotin: a study of desthiobiotin, 146, 475
- See *Melville, Moyer, Hofmann, and du Vigneaud*, 146, 487
- See *Simmonds and du Vigneaud*, 146, 685
- See *Schenck, Simmonds, Cohn, Stevens, and du Vigneaud*, 149, 355
- See *Simmonds, Cohn, Chandler, and du Vigneaud*, 149, 519
- Virtue, Robert W., and Doster-Virtue, Mildred E.** Studies on the production of taurocholic acid in the dog. II. Cystamine, 126, 141
- and —. III. Cystine disulfide, cysteine sulfinic acid, and cysteic acid, 127, 431
- and —. IV. Cysteine, homocysteine, and thioglycolic acid, 128, 665
- and —. The failure of intravenously injected fat to produce cholic acid in the dog, 133, 573
- and —. Studies on the production of taurocholic acid in the dog. V. Methionine sulfoxide, 137, 227
- Visscher, Frank E.** See *MacKay, Carne, Wick, and Visscher*, 141, 889
- and **Corley, Ralph C.** Influence of linoleic and palmitic acids of the diet on synthesis and storage of fatty acids in the white rat, 147, 291
- Volker, Joseph F., Hodge, Harold Carpenter, Wilson, Helen J., and Van Voorhis, Stanley N.** The adsorption of fluorides by enamel, dentin, bone,

- and hydroxyapatite as shown by the radioactive isotope, 134, 543
- Voris, Leroy, Ellis, Gordon, and Maynard, L. A.** The determination of neutral fat glycerol in blood with periodate. Application to the determination of arteriovenous differences in neutral fat, 133, 491
- Vos, B. J., Jr.** See *Eichelberger, Fletcher, Geiling, and Vos*, 133, 145
- See *Eichelberger, Geiling, and Vos*, 133, 661
- See *Eichelberger, Fletcher, Geiling, and Vos*, 134, 171
- Vreeland, Johanna.** See *Todd, Vreeland, Myers, and West*, 127, 269

W

- Wachtel, L. W., Hove, E., Elvehjem, C. A., and Hart, E. B.** Blood uric acid and liver uricase of zinc-deficient rats on various diets, 138, 361
- Wade, Nelson J.** See *Griffith and Wade*, 131, 567
- , 132, 627
- Waelisch, Heinrich, and Sperry, Warren M.** The composition of unsaponifiable lipids, 132, 787
- See *Sperry, Waelisch, and Stoyanoff*, 135, 281
- , **Sperry, Warren M., and Stoyanoff, V. A.** A study of the synthesis and deposition of lipids in brain and other tissues with deuterium as an indicator, 135, 291
- , —, and —. Lipid metabolism in brain during myelination, 135, 297
- See *Rittenberg and Waelisch*, 136, 799
- and **Rittenberg, D.** Glutathione. I. The metabolism of glutathione studied with isotopic glycine, 139, 761
- The excretion of keto acids, 140, 313
- , **Sperry, Warren M., and Stoyanoff, V. A.** The influence of growth and myelination on the deposition and metabolism of lipids in the brain, 140, 885
- See *Borek and Waelisch*, 141, 99

Waelisch, Heinrich—continued:

- and Rittenberg, D. Glutathione. II. The metabolism of glutathione studied with isotopic ammonia and glutamic acid, 144, 53
- and Miller, Herbert K. The relation of keto acid excretion to amino acid metabolism, 145, 1
- See *Anchel and Waelisch*, 145, 605
- See *Nachmansohn, John, and Waelisch*, 150, 485
- Wagner, J. R., Axelrod, A. E., Lipton, M. A., and Elvehjem, C. A.** A rat assay method for the determination of riboflavin, 136, 357
- Wahlin, H. B.** See *Burris, Eppling, Wahlin, and Wilson*, 148, 349
- Waisman, Harry A.** See *Woolley, Waisman, and Elvehjem*, 129, 673
- Wakeman, Alfred J.** See *Pucher, Wakeman, and Vickery*, 126, 43
- Waksman, Selman A., and Tishler, Max.** The chemical nature of actinomycin, an antimicrobial substance produced by *Actinomyces antibioticus*, 142, 519
- Walcott, Alexander.** See *Thannhauser, Benotti, Walcott, and Reinstein*, 129, 717
- Walden, M. K.** See *Kies and Schwimmer*, 145, 685
- Walker, Burnham S.** See *Barkan and Walker*, 131, 447
- 135, 37, 803
- See *Ellis and Walker*, 142, 291
- Wallace, William M., and Hastings, A. Baird.** The distribution of the bicarbonate ion in mammalian muscle, 144, 637
- and Lowry, Oliver H. An *in vitro* study of carbon dioxide equilibria in mammalian muscle, 144, 651
- Walsh, Anna I.** See *Looney and Walsh*, 127, 117
- 130, 635
- Walton, Clarence.** See *Johnston, Irvin, and Walton*, 131, 425
- Ward, S. M.** See *Hoagland and Ward*, 146, 115
- Ward, W. E.** See *Halliday, Deuel, Tragerman, and Ward*, 132, 171

- Warga, Mary.** See *Saier, Warga, and Grauer*, 137, 317
- Warner, Donald T.** See *Vestling and Warner*, 144, 687
- See *Rose, Haines, Johnson, and Warner*, 148, 457
- Warner, E. D.** See *Seegers, Brinkhous, Smith, and Warner*, 126, 91
- Warner, Robert C.** The kinetics of the hydrolysis of urea and of arginine, 142, 705
- and Cannan, R. Keith. The formation of ammonia from proteins in alkaline solution, 142, 725
- The alkaline hydrolysis of egg albumin, 142, 741
- Warren, Charles O., and Carter, Charles E.** The Pasteur effect in bone marrow, studied with carbon monoxide-oxygen mixtures, 150, 267
- Warren, Stafford L.** See *Mann, Leblond, and Warren*, 142, 905
- Waters, E. T.** See *Jaques, Waters, and Charles*, 144, 229
- Watson, Cecil James, Pass, I. J., and Schwartz, Samuel.** A study of the supposed conversion of protoporphyrin to coproporphyrin by the liver. I. The fate of parenterally administered protoporphyrin in dogs with bile renal fistulae, 139, 583
- See *Salzburg and Watson*, 139, 593
- See *Flink and Watson*, 146, 171
- See *Grinstein and Watson*, 147, 667, 671, 675
- Watson, Dennis W.** See *Seibert and Watson*, 140, 55
- Watson, E. M.** See *Williams and Watson*, 135, 337
- Weast, C. A., and Mackinney, G.** Chlorophyllase, 133, 551
- Weatherby, LeRoy S., and Cheng, Amber L. S.** The determination of flavones or quercetin-like substances in certain naturally occurring products, 148, 707
- Webb, Bailey D.** See *Kyker, Webb, and Andrews*, 139, 551
- Webb, Merrill.** See *Block, Jervis, Bolling, and Webb*, 134, 567

- Webb, T. J., and Kniazuk, Michael. Spectrophotometric examination of blood from animals receiving sulfanilamide, 128, 511
 —. See *Scudi, Bastedo, and Webb*, 136, 399
- Webster, George L. See *Martinek, Kirch, and Webster*, 149, 245
- Wegner, M. I., Kemmerer, A. R., and Fraps, G. S. Some factors that affect the microbiological method for riboflavin, 144, 731
 —, —, and —. Influence of the method of preparation of sample on microbiological assay for riboflavin, 146, 547
- Weichselbaum, T. E., Somogyi, Michael, and Rusk, Howard A. A method for the determination of small amounts of potassium, 132, 343
 — and —. A method for the determination of small amounts of ketone bodies, 140, 5
 —. See *Somogyi and Weichselbaum*, 145, 567
- Weil, Leopold, and Russell, Mary A. Proteolytic activity of plasma during tumor or embryonic growth in rats, 126, 245
 — and —. Studies on plasma phosphatase activity in relation to fat metabolism in rats, 136, 9
 —. Studies on plasma phosphatase activity during embryonic and tumor growth, 138, 375
 — and Jennings, Robert K. Investigations in enzymatic histochemistry. III. Distribution of enzymes in rabbit kidney, 139, 421
 — and Russell, Mary A. Studies on plasma phosphatase activity and on blood phospholipids in rats with obstructive jaundice, 144, 307
- Weinhouse, Sidney, and Brewer, John I. Cyclic variations in the lipids of the corpus luteum, 143, 617
- Weinstock, Harry H., Jr., May, Everette L., Arnold, Aaron, and Price, Donald. Amino acid analogues of pantothenic acid, 135, 343
- Weir, Everett G., and Hastings, A. Baird. The distribution of bromide and chloride in tissues and body fluids, 129, 547
- Weiss, Ethel. See *Saifer, Hughes, and Weiss*, 146, 527
- Weiss, Soma. See *Muus, Weiss, and Hastings*, 129, 303
- Weissberger, Louise Harris. The increase in phospholipid and total phosphorus metabolism of the kidney following the administration of ammonium chloride, with radioactive phosphorus as an indicator, 132, 219
 —. Phosphorus metabolism in phlorhizin diabetes, with radioactive phosphorus as an indicator, 139, 543
 — and Harris, Philip L. A possible vitamin D assay technique with radioactive strontium, 144, 287
- Weissman, Norman, and Schoenheimer, Rudolf. The relative stability of l(+)-lysine in rats studied with deuterium and heavy nitrogen, 140, 779
 —. See *Ratner, Weissman, and Schoenheimer*, 147, 549
- Welch, A. D. The preparation of a casein hydrolysate for the study of the relationship between choline and homocystine, 137, 173
 — and Landau, R. L. The arsenic analogue of choline as a component of lecithin in rats fed arsenocholine chloride, 144, 581
 —. See *Jukes and Welch*, 146, 19
- Welch, Eileen A. See *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 143, 473
- Welch, Mary S. See *Colowick, Welch, and Cori*, 133, 359, 641
- Wendel, Nannette M. See *Wendel, Wendel, and Cox*, 131, 177
- Wendel, William B., Wendel, Nannette M., and Cox, W. W. Methemoglobin as the principal abnormal pigment in the blood of humans showing cyanosis from sulfanilamide, 131, 177
 —. See *Cox and Wendel*, 143, 331

Wendel, William B.—*continued*:

- and Kimball, Sydnette. Formation of lactic acid and pyruvic acid in blood containing *Plasmodium knowlesi*,

145, 343

- Respiratory and carbohydrate metabolism of malaria parasites (*Plasmodium knowlesi*),

148, 21

- Werkman, C. H. See Wood, Werkman, Hemingway, and Nier,

135, 789

- See Silverman and Werkman,

138, 35

- See Wood, Werkman, Hemingway, and Nier,

139, 365, 377, 483

142, 31

- See Slade, Wood, Nier, Hemingway, and Werkman,

143, 133

- See Utter and Werkman,

146, 289

- See Krampitz, Wood, and Werkman,

147, 243

- Werthessen, Nicholas T. See Pearlman, Pincus, and Werthessen,

142, 649

- West, Edward S. See Todd, Vreeland, Myers, and West,

127, 269

- See Todd, Myers, and West,

127, 275

- , Christensen, Bert E., and Rinehart, Robert E. A micromethod for the determination of carbon dioxide in blood and other fluids,

132, 681

- See Christensen, West, and Dimick,

137, 735

- and Rinehart, Robert E. Reaction of ninhydrin with ascorbic acid and other endiol compounds. Decarboxylation of dehydroascorbic acid,

146, 105

- See Hight and West,

146, 655

- Westerbeke, Don. See Anderson, Seeley, Stewart, Redd, and Westerbeke,

135, 189

- Westerfeld, W. W., Thayer, Sidney A., MacCorquodale, D. W., and Doisy, Edward A. The ketonic estrogen of sow ovaries,

126, 181

- , MacCorquodale, D. W., Thayer, Sidney A., and Doisy, Edward A. The isolation of theelin from human placenta,

126, 195

- See Green, Westerfeld, Vennesland, and Knox,

140, 683

Westerfeld, W. W.—*continued*:

- The oxidation of estrone by hydrogen peroxide,

143, 177

- , Stotz, Elmer, and Berg, Robert L. The rôle of pyruvate in the metabolism of ethyl alcohol,

144, 637

- See Green, Westerfeld, Vennesland, and Knox,

145, 69

- and Lowe, Charles. The oxidation of *p*-cresol by peroxidase,

145, 463

- and Berg, Robert L. Observations on the metabolism of acetoin,

148, 523

- See Doisy and Westerfeld,

149, 229

- , Stotz, Elmer, and Berg, Robert L. The coupled oxidation-reduction of alcohol and pyruvate *in vivo*,

149, 237

- Wheeler, D. H. See Riemenschneider, Wheeler, and Sando,

127, 391

- , Riemenschneider, R. W., and Sando, Charles E. Preparation, properties, and thiocyanogen absorption of triolein and trilinolein,

132, 687

- White, A. G. C. See Woolley and White,

149, 285

- White, Abraham. See Beach and White,

127, 87

- See White and White,

131, 149

- and Lavin, G. I. The ultraviolet absorption spectrum of prolactin,

132, 717

- See Stevenson and White,

134, 709

- , Bonsnes, Roy W., and Long, C. N. H. Prolactin,

143, 447

- and Elman, Robert. Preparation of tryptophane-containing acid hydrolysates of proteins suitable for intravenous administration,

143, 797

- See Sayers, White, and Long,

149, 425

- White, Florence R. See White and White,

130, 435

- White, Julius. See Velick, White, and Lewis,

127, 477

- and White, Florence R. On the nature of the glutamic acid of malignant tumor tissue,

130, 435

- and White, Abraham. Inhibition of growth of the rat by oral administration of methylcholanthrene, benz-

White, Julius—continued:

- pyrene, or pyrene, and the effects of various dietary supplements, 131, 149
- See *Greenstein, Jenrette, Mider, and White*, 137, 795
- See *Greenstein, Jenrette, and White*, 141, 327
- Whitehead, Raymond.** See *MacLachlan, Hodge, and Whitehead*, 139, 185
- See *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 139, 897
- Whitman, Newton E.** See *Borchers, Berg, and Whitman*, 145, 657
- Wick, Arne N.** See *Barnes and Wick*, 131, 413
- See *MacKay, Wick, and Carne*, 132, 613
- See *MacKay, Carne, and Wick*, 133, 59
- See *MacKay, Barnes, Carne, and Wick*, 135, 157
- See *MacKay, Wick, and Barnum*, 135, 183
- , *MacKay, Eaton M., Carne, Herbert O., and Mayfield, Harry M.* The relative antiketogenic activity of glucose, glycine, and alanine, 136, 237
- See *MacKay, Wick, and Barnum*, 136, 503
- , 137, 183
- See *MacKay, Wick, Carne, and Barnum*, 138, 63
- and *Drury, D. R.* The effect of concentration on the rate of utilization of β -hydroxybutyric acid by the rabbit, 138, 129
- See *MacKay, Carne, Wick, and Visscher*, 141, 889
- Ketogenic action of branched chain fatty acids, 141, 897
- See *Kuizenga, Wick, Ingle, Nelson, and Carlland*, 147, 561
- Wiegand, Charlotte W., and Anderson, R. J.** The chemistry of the lipids of tubercle bacilli. LV. Studies on the wax fractions of the human tubercle bacillus, 126, 515

- Wiese, A. C., and Johnson, B. Connor.** A new method for the microdetermination of manganese in biological materials, 127, 203
- , —, *Elvehjem, C. A., Hart, E. B., and Halpin, J. G.* A study of blood and bone phosphatase in chick perosis, 127, 411
- Wilde, W. S.** The distribution of potassium in the cat after intravascular injection, 128, 309
- Wildman, Sam G.** See *Gordon and Wildman*, 147, 389
- Wilhelmi, Alfred E.** See *Fisher and Wilhelmi*, 132, 135
- See *Russell and Wilhelmi*, 137, 713
- , 140, 747
- See *Frame, Russell, and Wilhelmi*, 149, 255
- Wilkerson, Vernon A., and Tulane, Victor J.** The chemistry of human skin. III. The occurrence of methionine in human skin (stratum corneum), 129, 477
- Williams, Edward F., Jr.** See *Morrison and Williams*, 137, 461
- Williams, H. L., and Watson, E. M.** The influence of sulphhydryl compounds upon the activity of bone phosphatase *in vitro*, 135, 337
- Williams, Harold H.** See *Beach, Erickson, Bernstein, Williams, and Macy*, 128, 339
- See *Beach, Bernstein, Hummel, Williams, and Macy*, 130, 115
- See *Erickson, Arrin, Teague, and Williams*, 135, 671
- Williams, J. R., Jr.** See *Grollman, Williams, and Harrison*, 134, 115
- Williams, Ray D.** See *Mason and Williams*, 140, 417
- , 146, 589
- Williams, Roger J.** See *Snell, Pennington, and Williams*, 133, 559
- See *Pennington, Snell, and Williams*, 135, 213
- See *Eakin, Snell, and Williams*, 136, 801
- , 140, 535

Williams, Roger J.—*continued*:

- See *Snell, Guirard, and Williams*, 143, 519
- Williamson, M. B. See *Reineke, Williamson, and Turner*, 138, 83
143, 285
147, 115
- Williamson, S., and Green, D. E. The preparation of coenzyme I from yeast, 135, 345
- Wilson, D. Wright. See *Zapp and Wilson*, 126, 9, 19
- See *Irvin and Wilson*, 127, 555, 565, 575
- See *Gurin, Bachman, and Wilson*, 128, 525
- See *Kurtz and Wilson*, 129, 693
- See *Gurin, Bachman, and Wilson*, 133, 467, 477
- See *Lundgren, Gurin, Bachman, and Wilson*, 142, 367
- Wilson, Donald A. See *Strickler, Shaffer, Wilson, and Strickler*, 148, 251
- Wilson, Helen J. See *Volker, Hodge, Wilson, and Van Voorhis*, 134, 543
- Wilson, J. B., Lee, S. B., and Wilson, P. W. Mechanism of biological nitrogen fixation. IX. Properties of hydrogenase in *Azotobacter*, 144, 265
- See *Lee, Wilson, and Wilson*, 144, 273
- Wilson, J. W. See *Dill, Wilson, Hall, and Robinson*, 136, 449
- Wilson, P. W., Lee, S. B., and Wyss, Orville. Mechanism of symbiotic nitrogen fixation. V. Nature of inhibition by hydrogen, 139, 91
- See *Wilson, Lee, and Wilson*, 144, 265
- See *Lee, Wilson, and Wilson*, 144, 273
- , Burris, R. H., and Coffee, W. B. Hydrogenase and symbiotic nitrogen fixation, 147, 475
- See *Burris, Eppling, Wahlin, and Wilson*, 148, 349
- Windsor, Emanuel. See *Koehler, Windsor, and Hill*, 140, 811
- Winkler, Alexander W. See *Smith, Winkler, and Schwartz*, 129, 51

Winkler, Alexander W.—*continued*:

- See *Eisenman, Ott, Smith, and Winkler*, 135, 165
- See *Smith, Eisenman, and Winkler*, 141, 555
- Winnick, Theodore. See *Greenberg and Winnick*, 135, 761, 775, 781
- and Greenberg, David M. The use of optical rotation in the study of protein hydrolysis, 137, 429
- Microdiffusion methods based on the bisulfite reaction. I. The determination of acetone, 141, 115
- II. Determination of lactic acid by oxidation with ceric sulfate, 142, 451
- III. Determination of threonine by oxidation with periodate, 142, 461
- See *Cramer and Winnick*, 150, 259
- Winter, Irwin C. Fat metabolism following liver injury. Decreased iodine number of tissue fatty acids of male rats following carbon tetrachloride administration, 128, 283
- Fat metabolism after liver injury. Decreased fatty acid utilization by male rats following the administration of carbon tetrachloride, 135, 123
- and Crandall, Lathan A., Jr. The question of the portal absorption of fatty acids, 140, 97
- Fat metabolism after liver injury. Fatty acid utilization by rats treated with carbon tetrachloride on diets which were fat-free or contained fats with high or low iodine numbers, 142, 17
- Winternitz, M. C. See *Mylon, Winternitz, and de Süß-Nagy*, 143, 21
- Wintersteiner, O. See *Hirschmann and Wintersteiner*, 126, 737
- See *Pearlman and Wintersteiner*, 130, 35
132, 605
- See *Longwell and Wintersteiner*, 133, 219
- and Ritzmann, Johana R. The isolation of 7(β)-hydroxycholesterol from the serum of pregnant mares, 136, 697
- and Bergström, Sune. The products

Wintersteiner, O.—continued:

formed by the action of oxygen on colloidal solutions of cholesterol,

137, 785

— See *Bergström and Wintersteiner*,

141, 597

143, 503

145, 309, 327

Wise, E. C. See *Correll and Wise*,

126, 573, 581

Wise, H., Puck, T. T., and Stral, H. M.

A rapid colorimetric method for the determination of glycols in air,

150, 61

Wolf, Donald E. See *du Vigneaud*,

Melville, Folkers, Wolf, Mozingo,

Keresztesy, and Harris, 146, 475

Wolfe, John K. See *Hershberg and*

Wolfe, 133, 667

— See *Talbot, Wolfe, MacLachlan,*

Karush, and Butler, 134, 319

—, *Hershberg, E. B., and Fieser, Louis*

F. The polarographic determination

of ketonic steroids, 136, 653

— See *Talbot, Wolfe, MacLachlan, and*

Berman, 139, 521

— See *Hershberg, Wolfe, and Fieser*,

140, 215

— See *Hershberg and Wolfe*, 141, 215

— See *Talbot, Ryan, and Wolfe*,

148, 593

Womack, Madelyn, and Rose, William C.

The partial replacement of dietary

methionine by cystine for purposes of

growth, 141, 375

Wood, Earl H. A low temperature wet

ashing method applied to the study of

the electrolyte composition of the

ventricular musculature and lung

parenchyma of the dog, 143, 165

Wood, H. G., *Werkman, C. H., Heming-*

way, Allan, and Nier, A. O. Heavy

carbon as a tracer in bacterial fixation

of carbon dioxide, 135, 789

—, —, —, and —. Heavy carbon as a

tracer in heterotrophic carbon dioxide

assimilation, 139, 365

—, —, —, and —. The position of

carbon dioxide carbon in succinic acid

Wood, H. G.—continued:

synthesized by heterotrophic bacteria,

139, 377

—, *Werkman, C. H., Hemingway, Allan,*

and Nier, A. O. Mechanism of fixa-

tion of carbon dioxide in the Krebs

cycle, 139, 483

—, —, —, and —. Fixation of carbon

dioxide by pigeon liver in the dissimi-

lation of pyruvic acid, 142, 31

— See *Slade, Wood, Nier, Hemingway,*

and Werkman, 143, 133

— See *Krampitz, Wood, and Werkman*,

147, 243

Wood, John L. See *Kies, Dyer, Wood,*

and du Vigneaud, 128, 207

— See *du Vigneaud, Wood, and Irish*,

129, 171

— and *du Vigneaud, Vincent.* Race-

mization of benzyl-L-cysteine, with

a new method of preparing D-cystine,

130, 109

— and —. A new synthesis of cystine,

131, 267

— and —. On the synthesis of serine,

134, 413

— See *du Vigneaud, Wood, and Bink-*

ley, 138, 369

Wood, Thomas R. See *Rose and Wood*,

141, 381

— See *Ross and Wood*, 146, 49

— and *Ross, William F.* The ketene

acetylation of the parathyroid hor-

mone, 146, 59

Woodford, *Saramae.* See *Fieser, Tish-*

ler, and Sampson, 137, 659

Woodruff, H. Boyd. See *Foster and*

Woodruff, 148, 723

Woodward, Carl R., Jr. See *Stokes,*

Larsen, Woodward, and Foster, 150, 17

Woodward, Gladys E. See *Schroeder*

and Woodward, 129, 283

— See *Dohan and Woodward*, 129, 393

—, *Reinhart, Francis E., and Dohan,*

Janetta Schoonover. The glutamic

acid of malignant tissue proteins,

138, 677

— and —. The effect of pH on the

formation of pyrrolidonecarboxylic

acid and glutamic acid during enzy-

- matic hydrolysis of glutathione by rat kidney extract, 145, 471
- Wooley, Jerald G. See *Isbell, Wooley, Butler, and Sebrell*, 139, 499
- Woolf, Ralph B., Vieregger, Ellenmae, and Allen, Willard M. Study of the distribution of sodium pregnanediol glucuronide between *n*-butanol and urine of pregnant women, together with its practical application, 146, 323
- Woolley, D. W., Waisman, Harry A., and Elvehjem, C. A. Studies on the structure of the chick antidermatitis factor, 129, 673
- Biological responses to the constituent parts of pantothenic acid, 130, 417
- , McDaniel, L. E., and Peterson, W. H. Growth factors for bacteria. IX. Studies of a growth factor for *Clostridia*, 131, 381
- Pantothenic acid diphosphate, 134, 461
- A new dietary essential for the mouse, 136, 113
- Identification of the mouse anti-alopecia factor, 139, 29
- Manganese and the growth of lactic acid bacteria, 140, 311
- A method for the estimation of inositol, 140, 453
- A study of the biological specificity of inositol, 140, 461
- Destruction of thiamine by a substance in certain fish, 141, 997
- and Longworth, L. G. Isolation of an antibiotin factor from egg white, 142, 285
- See *Folch and Woolley*, 142, 963
- Some new dietary essentials required by guinea pigs, 143, 679
- and Krampitz, L. O. Reversal by phosphatides of the antimicrobial action of a crystalline protein from wheat, 146, 273
- Isolation and partial determination of structure of soy bean lipositol, a new inositol-containing phospholipid, 147, 581
- Woolley, D. W.—*continued*:
— and White, A. G. C. Production of thiamine deficiency disease by the feeding of a pyridine analogue of thiamine, 149, 285
- Woolley, Jean Rea. See *Greengard and Woolley*, 132, 83
- Worley, L. G. See *Albaum and Worley*, 144, 697
- Wortis, Herman. See *Bueding and Wortis*, 133, 585
- See *Bueding, Stein, and Wortis*, 137, 793
140, 697
- Wright, Lemuel D. See *Snell and Wright*, 139, 675
- The effect of glucose administration on the level of blood pantothenic acid, 142, 445
- The state of pantothenic acid in blood, 147, 261
- Wright, Norman. The infra-red absorption spectra of amino acids, 127, 137
- Wyckoff, Ralph W. G. The ultracentrifugal analysis of the latent mosaic virus protein, 128, 729
- Wyman, Jeffries, Jr. An analysis of the titration data of oxyhemoglobin of the horse by a thermal method, 127, 1
- The heat of oxygenation of hemoglobin, 127, 581
- See *Greenstein, Klemperer, and Wyman*, 129, 681
- and Ingalls, Elizabeth N. Interrelationships in the reactions of horse hemoglobin, 139, 877
- and —. A nomographic representation of certain properties of the proteins, 147, 297
- Wynne, A. M. See *Rabinowitch and Wynne*, 126, 109
- Wyss, Orville. See *Wilson, Lee, and Wyss*, 139, 91

Y

- Yannet, Herman, and Darrow, Daniel C. The effect of depletion of extracellular electrolytes on the chemical composi-

Yannet, Herman—continued:

- tion of skeletal muscle, liver, and cardiac muscle, 134, 721
- The effect of alkalosis on the chemical composition of brain, skeletal muscle, liver, and heart, 136, 265
- The effect of alkalosis on the relationship between serum calcium and protein *in vivo*, 137, 409
- Yenson, M. Mutahhar. See *Haurowitz, Schwerin, and Yenson*, 140, 353
- Young, E. Gordon, and Conway, Catherine F. On the estimation of allantoin by the Rimini-Schryver reaction, 142, 839
- Young, H. Y. See *Sideris, Young, and Krauss*, 126, 233
- Young, N. F. See *Kensler, Young, and Rhoads*, 143, 465
- Young, William C. See *Fish, Dorfman, and Young*, 143, 715
- Yuska, Henry. See *Sobel, Yuska, Peters, and Kramer*, 132, 239

Z

- Zapp, John A., Jr., and Wilson, D. Wright. Quantitative studies of carnosine and anserine in mammalian muscle. I. A method for the determination of carnosine and anserine, 126, 9
- and —. II. The distribution of carnosine and anserine in various muscles of different species, 126, 19
- See *Stadie, Lukens, and Zapp*, 132, 393
- See *Stadie, Zapp, and Lukens*, 132, 411, 423
- 137, 63, 75
- See *Stadie and Zapp*, 148, 669
- 150, 165
- Zechmeister, L., and Cholnoky, L. Carotenoids of Hungarian wheat flour, 135, 31
- and Polgár, A. The carotenoid and provitamin A content of the watermelon, 139, 193
- and —. Silk oak flowers as a source of β -carotene, 140, 1

Zechmeister, L.—continued:

- and Schroeder, W. A. The fruit of *Pyracantha angustifolia*: a practical source of pro- γ -carotene and poly-copene, 144, 315
- and Escue, R. B. Isolation of poly-copene and pro- γ -carotene from *Eronymus fortunei*, 144, 321
- Ziff, Morris. See *Chargaff and Ziff*, 131, 25
- See *Chargaff, Ziff, and Hogg*, 131, 35
- See *Chargaff, Ziff, and Cohen*, 135, 351
- 136, 257
- and Chargaff, Erwin. Studies on the chemistry of blood coagulation. XI. The mode of action of heparin, 136, 689
- See *Chargaff, Ziff, and Rittenberg*, 138, 439
- See *Chargaff and Ziff*, 138, 787
- See *Chargaff, Ziff, and Moore*, 139, 383
- See *Chargaff and Ziff*, 140, 927
- See *Chargaff, Ziff, and Rittenberg*, 144, 343
- Zimmerli, A. See *Nield, Russell, and Zimmerli*, 136, 73
- , Nield, Cyril H., and Russell, Walter C. A modified antimony trichloride reagent for the determination of certain sterols and vitamins D₂ and D₃, 148, 245
- Zinsser, Hans H. See *Drinker and Zinsser*, 148, 187
- Zitin, Bernard. See *Zittle and Zitin*, 144, 99, 105
- Zittle, Charles A., and O'Dell, Robert A. The determination of cystine: the use of cuprous oxide for simultaneous reduction and precipitation of cystine as the cuprous mercaptide, 139, 753
- and —. Chemical studies of bull spermatozoa. Lipid, sulfur, cystine, nitrogen, phosphorus, and nucleic acid content of whole spermatozoa and of the parts obtained by physical means, 140, 899

Zittle, Charles A.—continued:

- and O'Dell, Robert A. Chemical studies of bull spermatozoa. The methionine content of whole spermatozoa and of the parts obtained by physical means, 141, 239
- and Harris, Tzvee N. The antigenic structure of hemolytic streptococci of Lancefield Group A. X. The purification and certain properties of the group-specific polysaccharide, 142, 823

Zittle, Charles A.—continued:

- and Zitin, Bernard. The amount and distribution of cytochrome oxidase in bull spermatozoa, 144, 99
- and —. Non-hemin and total iron in bull spermatozoa, 144, 105
- Zondek, Samuel Georg. See Brückmann and Zondek, 135, 23
- Zscheile, F. P. See Beadle and Zscheile, 144, 21

SUBJECT INDEX

A

- Abrine:** Synthesis and configurational relationships, *Cahill and Jackson*, 1938, 126, 29
- Acetaldehyde:** Blood cells, red, *Barker*, 1941, 137, 783
—, determination, colorimetric, *Stotz*, 1943, 148, 585
- Acetic acid:** Aceto-. See Acetoacetic acid
- Acetone body formation, relation, *Swendseid, Barnes, Hemingway, and Nier*, 1942, 142, 47
- α -Aminophenyl-, alanine, and, configurational correlation, *Kuna, Ovakimian, and Levene*, 1941, 137, 337
- Cholesterol formation, biological, relation, *Bloch and Rittenberg*, 1942, 143, 297
— —, effect, *Bloch and Rittenberg*, 1942, 145, 625
- Formation, acetoacetic acid hydrolysis, *Lehninger*, 1942, 143, 147
—, enzymatic, from acetoacetic acid, *Lehninger*, 1942, 143, 147
- Guanido-, dietary, liver lipids, effect, *Stetten and Grail*, 1942, 144, 175
- Iodo-, carbohydrate metabolism, isolated tissues, effect, *Barker, Shorr, and Malam*, 1939, 129, 33
—, egg albumin, denatured, and, reaction, *Rosner*, 1940, 132, 657
—, growth effect, *Stevenson and White*, 1940, 134, 709
—, sulfur metabolism, influence, *Stevenson and White*, 1940, 134, 709
- Ketogenic activity, *MacKay, Barnes, Carne, and Wick*, 1940, 135, 157
- Liver glycogen, radioactive isotope in study, *Buchanan, Hastings, and Nesbett*, 1943, 150, 413
—, non-formation, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 75

Acetic acid—continued:

- Mercapto-, iron determination, spectrophotometric, use in, *Koenig and Johnson*, 1942, 142, 233
- Monoiodo-, monosaccharide and sodium chloride absorption, intestinal, effect, *Klinghoffer*, 1938, 126, 201
- Phenylamino-, esters, Raney catalyst, reactions, *Ovakimian, Kuna, and Levene*, 1940, 135, 91
- Acetoacetate:** Kidney, carbohydrate synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- Acetoacetic acid:** *Koehler, Windsor, and Hill*, 1941, 140, 811
- Acetic acid formation, enzymatic, *Lehninger*, 1942, 143, 147
- Acid-splitting reaction, *Lehninger*, 1942, 143, 147
- Blood, determination, bisulfite-binding method, *Klein*, 1940, 135, 143
— pyruvic acid determination, effect, *Klein*, 1941, 137, 311
- β -Hydroxybutyric acid and, blood and urine, glucose effect, *Stark and Somogyi*, 1943, 147, 721
— — —, — and urine, insulin effect, *Stark and Somogyi*, 1943, 147, 731
— — —, — and urine, relationship, *Stark and Somogyi*, 1943, 147, 319
— —, ratio, blood and urine, Primates, *Friedemann*, 1942, 142, 635
- Pyruvic acid determination, elimination in, *Elgart and Nelson*, 1941, 138, 443
- Acetoacetic ester(s):** Substituted, α -amino acids, synthesis from, *Hamlin and Hartung*, 1942, 145, 349
- Acetobacter suboxydans:** Growth factor, *p*-aminobenzoic acid, *Lampen, Underkofler, and Peterson*, 1942, 146, 277

- Acetoin:** Blood, acetoin administration effect, *Greenberg*, 1943, 147, 11
 Determination, colorimetric, *Stotz and Raborg*, 1943, 150, 25
 —, polarographic, *Greenberg*, 1943, 147, 11
 Metabolic acetylations, relation, *Doisy and Westerfeld*, 1943, 149, 229
 Metabolism, *Westerfeld and Berg*, 1943, 148, 523
- Acetone:** *Koehler, Windsor, and Hill*, 1941, 140, 811
 Blood, determination, bisulfite-binding method, *Klein*, 1940, 135, 143
 Determination, microdiffusion, bisulfite reaction, *Winnick*, 1941, 141, 115
 Dihydroxy-, blood, determination, *Turner, Kress, and Harrison*, 1943, 148, 581
- Acetone bodies:** Blood, determination, *Barnes and Wick*, 1939, 131, 413
Crandall, 1940, 133, 539
 —, —, salicylaldehyde use, *Behre*, 1940, 136, 25
 Excretion, *dl*-lysine monohydrochloride effect, *Sharp and Berg*, 1941, 141, 739
 Formation, acetic acid relation, *Swendseid, Barnes, Hemingway, and Nier*, 1942, 142, 47
 Liver-produced, form, *Crandall*, 1940, 135, 139
 Metabolism, mammary gland, lactating, ketosis effect, *Shaw*, 1942, 142, 53
 Urine, determination, salicylaldehyde use, *Behre*, 1940, 136, 25
 —, tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and *l*(-)-kynurenine effect, *Borchers, Berg, and Whitman*, 1942, 145, 657
 Utilization, *Mirsky, Nelson, and Grayman*, 1939, 130, 179
Grayman, Nelson, and Mirsky, 1939, 131, 121
Nelson, Grayman, and Mirsky, 1940, 132, 711
 1941, 140, 361
- Acetone bodies—continued:**
 Utilization, adrenalectomy influence, *Nelson, Grayman, and Mirsky*, 1940, 132, 711
 —, feeding and nephrectomy effect, *Mirsky, Nelson, and Grayman*, 1939, 130, 179
 —, glucose and nephrectomy, *Mirsky, Nelson, and Grayman*, 1939, 130, 179
 —, sex influence, *Grayman, Nelson, and Mirsky*, 1939, 131, 121
 See also Ketone bodies
- Acetone-glyceraldehyde:** *Baer and Fischer*, 1939, 128, 463, 475, 491
 1941, 140, 397
- Acetone glycerol:** *d*(+)-, glycerides, optically active, synthesis, *Baer and Fischer*, 1939, 128, 475
 —, preparation, *Baer and Fischer*, 1939, 128, 463
- Acetopyruvic acid:** Metabolism, *Lehninger*, 1943, 148, 393
- Acetylation:** Metabolic, acetoin relation, *Doisy and Westerfeld*, 1943, 149, 229
- Acetyl-S-*p*-bromobenzyl-*l*-cysteine:** N-, synthesis from *p*-bromobenzyl bromide, S-*p*-bromobenzyl-*l*-cysteine, and S-*p*-bromobenzylglutathione, *Stekol*, 1941, 138, 225
- Acetylcholine:** Adenosinetriphosphatase system, activation, *DuBois and Potter*, 1943, 148, 451
 Formation, glutamic acid effect, *Nachmansohn, John, and Waelsch*, 1943, 150, 485
 —, mechanism, *Baer*, 1942, 146, 391
- Acetyl derivative(s):** Tobacco mosaic virus, *Miller and Stanley*, 1941, 141, 905
- Acetylglycine:** Hippuric acid synthesis, effect, *Abbott*, 1942, 145, 241
- Acetylmethylcarbinol:** Formation from pyruvic acid, bacterial enzyme preparation, use, *Silverman and Werkman*, 1941, 138, 35
- Achlya:** Hormones, sexual, *Raper and Haagen-Smit*, 1942, 143, 311

- Achlya bisexualis:** Hormone A, properties, *Raper and Haagen-Smit*, 1942, 143, 311
- Achromotrichia:** *p*-Aminobenzoic acid effect, *Martin and Ansbacher*, 1941, 138, 441
- Nutritional, curative factor, *György, Poling, and Subbarow*, 1940, 132, 789
- , factor preventing, fractionation, *Nielsen, Oleson, and Elvehjem*, 1940, 133, 637
- Acid(s):** Fat, egg yolk, lecithin and glyceride fractions, *Riemenschneider, Ellis, and Titus*, 1938, 126, 255
- Fatty. *See* Fatty acids
- Ingested, excretion rate, *Kuyper*, 1942, 145, 615
- Organic. *See* Organic acids
- Production from glucose, dental plaque relation. *Muntz*, 1943, 148, 225
- Acid-base:** -Binding capacity. collagen, *Theis and Jacoby*, 1942, 146, 163
- Acid-base equilibrium:** *d'Elseaur, Blackwood, Palmer, and Sloman*, 1942, 144, 529
- Jejunal secretions, *McGee and Hastings*, 1942, 142, 893
- Sulfanilamide effect, *Free, Davies, and Myers*, 1943, 147, 167
- Acidosis:** Ketosis, effect, *MacKay, Wick, Carne, and Barnum*, 1941, 138, 63
- Shock effect, *Allison, Cole, Leatham, Nastuk, and Anderson*, 1943, 147, 255
- Aconite:** Alkaloids, *Jacobs, Elderfield, and Craig*, 1939, 128, 439
- Jacobs and Craig*, 1940, 136, 323
- 1941, 141, 67
- 1942, 143, 589, 605
- Craig and Jacobs*, 1942, 143, 611
- Jacobs and Craig*, 1943, 147, 567, 571
- Aconitine:** Derivatives, oxidation, nitric and chromic acids, *Jacobs and Craig*, 1940, 136, 323
- Oxidation, nitric and chromic acids, *Jacobs and Craig*, 1940, 136, 323
- Aconitum heterophyllum:** Benzoyl heteratisine, *Jacobs and Craig*, 1943, 147, 571
- Heteratisine and hetisine isolation, *Jacobs and Craig*, 1942, 143, 605
- Acrodynia:** Fatty acids, essential, and vitamin B₆ effect, *Schneider, Steenbock, and Platiz*, 1940, 132, 539
- Actinomyces antibioticus:** Actinomycin, *Waksman and Tishler*, 1942, 142, 519
- Actinomycin:** *Waksman and Tishler*, 1942, 142, 519
- Acylation(s):** Biological, mechanism, *Baer*, 1942, 146, 391
- Adaptation syndrome:** Blood plasma and cell, red. chlorides, effect, *Karady, Selye, and Browne*, 1939, 131, 717
- Adenine:** Antisulfonamide, effect, *Martin and Fisher*, 1942, 144, 289
- Determination, *Hitchings and Fiske*, 1941, 141, 827
- Dinucleotide, flavin, amino acids and, equilibrium relation, *Stadie and Zapp*, 1943, 150, 165
- , —. synthesis from riboflavin, blood cells, effect, *Klein and Kohn*, 1940, 136, 177
- Nucleotides, crystalline, isolation, *Buell*, 1943, 150, 389
- , myokinase action, *Kalckar*, 1943, 148, 127
- Adenocarcinoma:** Blood esterase determination, micro-, *Troescher and Norris*, 1940, 132, 553
- See also* Cancer, Tumor
- Adenosine-5'-phosphoric acid:** Determination, *Schlenk and Schlenk*, 1941, 141, 311
- Homologues, determination, *Schlenk and Schlenk*, 1941, 141, 311
- Adenosinetriphosphatase:** System, acetylcholine, activation, *DuBois and Potter*, 1943, 148, 451
- Tissue, determination, *DuBois and Potter*, 1943, 150, 185
- Adenosine triphosphate:** Blood cells, rickets, *Rapoport and Guest*, 1938, 126, 749

Adenosine triphosphate—continued:

- Brain, *Kerr*, 1941, 140, 77
 —, determination, *Kerr*, 1942, 145, 647
 Decomposition products, brain, determination, *Kerr*, 1942, 145, 647
 Magnesium anesthesia, relation, *DuBois, Albaum, and Potter*, 1943, 147, 699
 Preparation, *Kerr*, 1941, 139, 121
- Adenosine-3-triphosphate:** Bacteria, autotrophic, *LePage and Umbreit*, 1943, 148, 255
- Adenylic acid:** Determination, micro-, *Borsook and Dubnoff*, 1939, 131, 163
 Muscle, preparation, *Kerr*, 1941, 139, 131
- Adenylic system:** Phosphorylation, potassium and other ions, rôle, *Boyer, Lardy, and Phillips*, 1943, 149, 529
- Adenyl pyrophosphate:** Hexose phosphorylation, enzyme, rôle, *Colowick and Kalckar*, 1943, 148, 117
- Adipic acid:** Biotin diaminocarboxylic acid oxidation product, *Hofmann, Melville, and du Vigneaud*, 1942, 144, 513
- Adrenal(s):** Base, new, *Pfiffner and North*, 1940, 132, 461
 Choline esterase, *Antopol and Glick*, 1940, 132, 669
 Cortex, extracts, beef, hog, and sheep, activity, comparison, *Kuizenga, Wick, Ingle, Nelson, and Cartland*, 1943, 147, 561
 —, —, preparation, *Kuizenga, Wick, Ingle, Nelson, and Cartland*, 1943, 147, 561
 —, hormone. See also Adrenocorticotrophic hormone
 —, principles, insulin hypoglycemia and liver glycogen, effect, *Grattan and Jensen*, 1940, 135, 511
 —, steroids, liver arginase, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1943, 147, 99
 Dimethyl sulfone, *Pfiffner and North*, 1940, 134, 781
 Fat absorption and, *Barnes, Miller, and Burr*, 1941, 140, 241

Adrenal(s)—continued:

- 17-Hydroxyprogesterone isolation, *Pfiffner and North*, 1941, 139, 855
 Insufficiency, blood electrolyte and water equilibria, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
 —, muscle, and blood, electrolyte and water exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
 —, tissue electrolytes, *Darrow, Harrison, and Taffel*, 1939, 130, 487
 Ketone, α,β -unsaturated, isolation, *Pfiffner and North*, 1941, 140, 161
 Lipids, *MacLachlan, Hodge, and Whitehead*, 1941, 139, 185
 —, fasting effect, *Oleson and Bloor*, 1941, 141, 349
 Liver fat transport, effect, *Barnes, Miller, and Burr*, 1941, 140, 247
 Vitamin C, diphtherial intoxication, relation, *Torrance*, 1940, 132, 575
- Adrenalectomy:** Acetone body utilization, influence, *Nelson, Grayman, and Mirsky*, 1940, 132, 711
 Carbohydrate metabolism, cortin and sodium chloride effect, *Kendall, Flock, Bollman, and Mann*, 1938, 126, 697
 Kidney glyconeogenesis, effect, *Russell and Wilhelmi*, 1941, 140, 747
 — tissue metabolism, effect, *Russell and Wilhelmi*, 1941, 137, 713
 Liver arginase, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1943, 147, 99
 Mineral metabolism, cortin and sodium chloride effect, *Kendall, Flock, Bollman, and Mann*, 1938, 126, 697
 Vitamins B₁ and B₂, phosphorylation, effect, *Ferrebee*, 1940, 136, 719
- Adrenalin:** Blood chloride and phosphorus, injection effect, *MacVicar and Heller*, 1941, 137, 843
 —, determination, *Bloor and Bullen*, 1941, 138, 727
 Derivatives, amine oxidase inactivation, effect, *Friedenwald and Herrmann*, 1942, 146, 411
 See also Epinephrine

- Adrenocortical carcinoma:** Δ^5 -Androstetriol-3(β), 16, 17 isolation, *Hirschmann*, 1943, 150, 363
Steroid excretion, *Hirschmann*, 1943, 150, 363
- Adrenocorticotrophic hormone:** *Li, Evans, and Simpson*, 1943, 149, 413
Pituitary, insulin hypoglycemia and liver glycogen, effect, *Grattan and Jensen*, 1940, 135, 511
- Adrenotrophic hormone:** Pituitary, preparation and properties, *Sayers, White, and Long*, 1943, 149, 425
- Aerodehydrogenase:** Glucose, antibacterial, *Penicillium notatum*, *Birkinshaw and Raistrick*, 1943, 148, 459
- Aerogenes:** Bacteria, sugars, rare, fermentation, *Field and Poe*, 1940, 132, 473
Colon bacteria and, *d*-fucose fermentation, *Field and Poe*, 1940, 132, 473
- Age:** Blood calcium and phosphorus, effect, *Anderson and Elvehjem*, 1940, 134, 217
Central nervous system phospholipid metabolism, influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*, 1940, 132, 23
Creatine-creatinine excretion, creatine ingestion effect, *Hyde*, 1942, 143, 301
Liver and muscle glycogen, effect, *Heymann and Modic*, 1939, 131, 297
- Aging:** Heart, changes, *Lowry, Hastings, Hull, and Brown*, 1942, 143, 271
Histochemical "changes, *Lowry and Hastings*, 1942, 143, 257
Lowry, Hastings, Hull, and Brown, 1942, 143, 271
Lowry, McCay, Hastings, and Brown, 1942, 143, 281
— —, determination, *Lowry and Hastings*, 1942, 143, 257
Muscle, changes, *Lowry, Hastings, Hull, and Brown*, 1942, 143, 271
- Air:** Glycol determination, colorimetric, *Wise, Puck, and Stral*, 1943, 150, 61
- Alanine:** α -Aminophenylacetic acid and, configurational correlation, *Kuna Ovakimian, and Levene*, 1941, 137, 337
Antiketogenic activity, *Wick, MacKay, Carne, and Mayfield*, 1940, 136, 237
 β -, determination, microbiological, *Schenck*, 1943, 149, 111
—, origin, body, *Schenck*, 1943, 149, 111
Benzoylation, *Levy and Palmer*, 1942, 146, 493
dl-, liver glycogen deposition, effect, *MacKay, Wick, and Carne*, 1940, 132, 613
Isomers, liver glycogen formation, effect, *MacKay, Wick, and Barnum*, 1941, 137, 183
l-, preparation, *d*-amino acid oxidase use, *Behrens*, 1941, 141, 465
—, —, protein hydrolysates, *Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
Oxidation, liver, factors influencing, *Rossiter*, 1940, 135, 431
Phenyl-. See Phenylalanine
Resolution, *Levy and Palmer*, 1942, 146, 493
Synthetic, resolution, *Pacsu and Mullen*, 1940, 136, 335
- Albumin:** Blood serum, carbon suboxide-treated, ultracentrifugal behavior, *Oncley, Ross, and Tracy*, 1941, 141, 797
— —, crystalline, catalase inhibition, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
— —, crystallization, *Kendall*, 1941, 138, 97
— —, denaturation, *Neurath and Saum*, 1939, 128, 347
— —, — and reversal, *Neurath, Cooper, and Erickson*, 1942, 142, 249
— —, determination, *Robinson, Price, and Hogden*, 1938, 126, 207, 213
— —, —, biuret reaction, *Kingsley*, 1939, 131, 197
— —, —, colorimetric, *Looney and Walsh*, 1939, 130, 635

Albumin—continued:

- Blood serum, determination, filter paper protein adsorption, effect, *Harris*, 1939, 127, 751
- , diffusion and viscosity measurements, urea presence, *Neurath and Saum*, 1939, 128, 347
- , iodinated, thyroid, effect, *Muus, Coons, and Salter*, 1941, 139, 135
- , malonyl, chymotryptic digestion, *Ross and Tracy*, 1942, 145, 19
- , methionine absence, *Brand and Kassell*, 1941, 141, 999
- , separation, *Kingsley*, 1940, 133, 731
- Crystalline, fractions, blood serum, electrophoresis, *Sharp, Cooper, Erickson, and Neurath*, 1942, 144, 139
- Egg. *See* Egg albumin
- Malonyl, blood serum, chymotryptic digestion, *Ross and Tracy*, 1942, 145, 19
- Alcaligenes faecalis:** Cholic acid, effect, *Schmidt, Hughes, Green, and Cooper*, 1942, 145, 229
- Alcohol(s):** Aliphatic, higher, fatty acids, biological relations, *Stetten and Schoenheimer*, 1940, 133, 347
- Fermentation, *Fusarium*, *in vivo*, diphosphopyridine nucleotide effect, *Gould, Tytell, and Jaffe*, 1942, 146, 219
- Primary and secondary, dehydrogenation, *Fusarium lini*, *Goepfert*, 1941, 140, 525
- Protein, purified, animal, effect, *Harris and Mattill*, 1940, 132, 477
- Pyruvate and, oxidation-reduction, coupled, *in vivo*, *Westerfeld, Stotz, and Berg*, 1943, 149, 237
- Sugar, *Carr and Forman*, 1939, 128, 425
- Ellis and Krantz*, 1941, 141, 147
- , determination, micro-, *Todd, Vreeland, Myers, and West*, 1939, 127, 269
- Tissue vitamin A, effect, *Baumann, Foster, and Moore*, 1942, 142, 597
- See also* Batyl alcohol, Benzyl alcohol, Chimyl alcohol, Ethyl alcohol, Selachyl alcohol

- Alcohol precipitate factor:** Chick, nature, *Schumacher, Heuser, and Norris*, 1940, 135, 313
- Aldehyde(s):** Fatty, higher, tissue, isolation, acidic carbonyl reagents, use, *Anchel and Waelisch*, 1942, 145, 605
- Aldobionic acid:** Flaxseed mucilage, structure, *Tipson, Christman, and Levene*, 1939, 128, 609
- Aldolase:** Equilibrium, *Meyerhof and Junowicz-Kocholaty*, 1943, 149, 71
- Aldo-monosaccharide(s):** Benzimidazole derivatives, identification, *Moore and Link*, 1940, 133, 293
- Aldose(s):** Oxidation, hypiodite in methanol, *Moore and Link*, 1940, 133, 293
- Alfalfa:** Vitamin K₁ identification, *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 1939, 130, 433
- Algae:** Chlorofucine, *Strain and Manning*, 1942, 144, 625
- See also* *Chlorella*
- Alignment chart:** Ultracentrifugation computation, *Schachman*, 1942, 143, 395
- See also* Nomogram
- Alimentary tract:** Calcium, *Adolph and Liang*, 1941, 137, 517
- Aliphatic acid(s):** α -Substituted, homologous series, *Levene and Kuna*, 1941, 141, 391
- Alkali:** Buffer, blood, cutaneous, determination, *Rubin*, 1938, 126, 679
- Ingested, excretion rate, *Kuyper*, 1942, 145, 615
- Alkaloid(s):** Aconite, *Jacobs, Elderfield, and Craig*, 1939, 128, 439
- Jacobs and Craig*, 1940, 136, 323
- 1941, 141, 67
- 1942, 143, 589, 605
- Craig and Jacobs*, 1942, 143, 611
- Jacobs and Craig*, 1943, 147, 567, 571
- Aconitum heterophyllum*, isolation, *Jacobs and Craig*, 1942, 143, 605
- 1943, 147, 571
- Ergot,** *Jacobs and Gould*, 1938, 126, 67
- Jacobs and Craig*, 1939, 128, 715
- Jacobs and Gould*, 1939, 130, 399
- Gould, Craig, and Jacobs*, 1942, 145, 487

Alkaloid(s)—continued:

- Veratrine, *Craig and Jacobs*,
 1939, 129, 79
 1940, 134, 123
 1941, 139, 263
Craig, Jacobs, and Lavin,
 1941, 139, 277
Craig and Jacobs,
 1941, 139, 293
Jacobs, Craig, and Lavin,
 1941, 141, 51
Craig and Jacobs,
 1941, 141, 253
 1942, 143, 427
Jacobs and Craig,
 1943, 148, 41, 51
Craig and Jacobs,
 1943, 148, 57
Jacobs and Craig,
 1943, 149, 271
Craig and Jacobs,
 1943, 149, 451
- Alkalosis:** Blood serum calcium and protein, effect, *Yannet*,
 1941, 137, 409
 Brain, muscle, liver, and heart, effect, *Yannet*,
 1940, 136, 265
 Chloride deficiency, relation, *Greenberg and Cuthbertson*, 1942, 145, 179
 Ketosis, effect, *MacKay, Wick, Carne, and Barnum*, 1941, 138, 63
 Sodium bicarbonate-induced, blood serum electrolytes, *Kirsner*,
 1942, 145, 219
- Alkaptonuria:** Tyrosine effect, *Abbott and Salmon*, 1943, 150, 339
- Alkylbenzenesulfonate:** Detergents, egg albumin, electrophoresis, *Lundgren, Elam, and O'Connell*, 1943, 149, 183
- Allantoin:** Determination, *Rimini-Schryver* reaction, *Young and Conway*, 1942, 142, 839
- Allocholan-3,17-dione:** Etio-, androsterone, conversion, *Dorfman*,
 1940, 132, 457
- Allocholanol-3(β)-17-one:** Etio-, testosterone conversion, *Dorfman and Fish*,
 1940, 135, 349
 —, urine, isolation, *Pearlman*,
 1940, 136, 807
- Allopregnanol-3(β)-one-20:** Urine, pregnancy, isolation, *Heard and McKay*,
 1939, 131, 371
Pearlman, Pincus, and Werthessen,
 1942, 142, 649

- Allothreonine:** *dl*-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville*,
 1940, 133, 109
 Threonine, conversion, *Carter, Handler, and Melville*, 1939, 129, 359
- Alopecia:** Anti-, factor, mouse, *Woolley*,
 1941, 139, 29
- Aluminum:** Succinic dehydrogenase-cytochrome system, effect, *Horecker, Stotz, and Hogness*, 1939, 128, 251
- Amide(s):** Bonds, proteins, hydrolysis, catalyzed, *Steinhardt*,
 1941, 141, 995
 Determination, micro-, *Borsook and Dubnoff*, 1939, 131, 163
 Metabolism, seedlings, etiolated, *Vickery and Pucher*, 1943, 150, 197
 Plant, green, synthesis mechanism, *Vickery and Pucher*, 1939, 128, 703
- Amidine group:** Creatine, origin, biological, *Bloch and Schoenheimer*,
 1940, 134, 785
- Amine(s):** Aliphatic, configurational relationships, *Levene and Kuna*,
 1941, 140, 259
- Oxidase, inactivation, catechol and adrenalin derivatives, effect, *Friedenwald and Herrmann*,
 1942, 146, 411
 —, inhibitor specificity, *Heegaard and Alles*,
 1943, 147, 505
 —, substrate specificity, *Alles and Heegaard*, 1943, 147, 487
 Oxidation, pyrrole effect, *Bernheim, Bernheim, and Michel*,
 1938, 126, 273
 -Precipitating reagent, saccharolactone as, *Kurtz and Wilson*,
 1939, 129, 693
 Pressor, phenolic, tyrosinase, relation, *Alles, Blohm, and Saunders*,
 1942, 144, 757
- Aminoacetophenone:** *p*-, diazotized, biological materials, thiamine determination, use, *Melnick and Field*,
 1939, 127, 515
 —, —, thiamine, reaction, *Melnick and Field*,
 1939, 127, 505
- Amino acid(s):** *Dunn and Porush*,
 1939, 127, 261
Stoddard and Dunn, 1942, 142, 329

Amino acid(s)—continued:

- Goettsch, Lytle, Grim, and Dunbar,
1942, 144, 121
- Dunn, Frieden, Stoddard, and Brown,
1942, 144, 487
- α -, synthesis, acetoacetic esters, substituted, Hamlin and Hartung,
1942, 145, 349
- , —, ethyl benzamidomalonate use,
Redemann and Dunn,
1939, 130, 341
- Absorption spectra, infra-red, Wright,
1939, 127, 137
- Acylation, pyridine, Carter, Handler,
and Stevens,
1941, 138, 619
- Aliphatic, activity, aqueous solution,
dipolar distance effect, Smith and
Smith,
1940, 132, 47
- d*-Amino acid oxidase and, equilibrium
relation, Stadie and Zapp,
1943, 150, 165
- Analogues, pantothenic acid, Wein-
stock, May, Arnold, and Price,
1940, 135, 343
- Anemia, deaminized casein-produced,
effect, Guerrant and Hogan,
1939, 128, 363
- Aromatic, viruses, tobacco mosaic and
cucumber, Knight and Stanley,
1941, 141, 39
- Basic, blood serum, proteins, Block,
1940, 133, 71
- , proteins, determination, electro-
lytic, Albanese,
1940, 134, 467
- Benzoylation, Carter and Stevens,
1941, 138, 627
- Blood cell, red, posthemolytic residue,
Beach, Erickson, Bernstein, Wil-
liams, and Macy,
1939, 128, 339
- plasma, determination, ninhydrin-
carbon dioxide reaction, MacFadyen,
1942, 145, 387
- —, retention, hypoproteinemia,
liver function, relation, Goettsch,
Lytle, Grim, and Dunbar,
1942, 144, 121
- Brain cephalin, Folch and Schneider,
1941, 137, 51
- Carbon suboxide and, reaction, Ross
and Green,
1941, 137, 105

Amino acid(s)—continued:

- Complex, selenium- and sulfur-con-
taining, *Astragalus pectinatus*, isola-
tion, Horn and Jones, 1941, 139, 649
- Cucurbit seed globulins, Vickery,
Smith, Hubbell, and Nolan,
1941, 140, 613
- Cystine excretion, effect, Hess and
Sullivan,
1942, 142, 3
- d*-, gramicidin, Lipmann, Hotchkiss,
and Dubos,
1941, 141, 163
- , oxidase, *l*-alanine preparation, use,
Behrens,
1941, 141, 465
- , —, amino acids and, equilibrium
relation, Stadie and Zapp,
1943, 150, 165
- , —, benzoic acid effect, Klein and
Kamin,
1941, 138, 507
- , —, liver, thyroid feeding effect,
Klein,
1939, 131, 139
- , —, specificity, Klein and Handler,
1941, 139, 103
- , —, tissue, riboflavin deficiency
effect, Axelrod, Sober, and Elvehjem,
1940, 134, 749
- , tyrocidine, Lipmann, Hotchkiss,
and Dubos,
1941, 141, 163
- Deamination, oxidized phenols, action,
Hubard,
1938, 126, 489
- Dehydrogenated, peptides, Doherty,
Tietzman, and Bergmann,
1943, 147, 617
- Determination, Bergmann and Stein,
1939, 128, 217
- , isotope dilution procedure, Ritten-
berg and Foster,
1940, 133, 737
- , microbiological, Shankman, Dunn,
and Rubin,
1943, 150, 477
- , ninhydrin reaction, apparatus,
Christensen, West, and Dimick,
1941, 137, 735
- , semimicro-, Ing and Bergmann,
1939, 129, 603
- , solubility product method, Moore
and Stein,
1943, 150, 113
- Di-, phospho-12-tungstates, solubility
and composition, Van Slyke, Hiller,
and Dillon,
1942, 146, 137
- Eukeratins, Block,
1939, 128, 181

Amino acid(s)—continued:

- Flavin adenine dinucleotide and, equilibrium relation, *Stadie and Zapp*, 1943, 150, 165
- Formation, animals, ammonia utilization, *Foster, Schoenheimer, and Rittenberg*, 1939, 127, 319
- Free, blood filtrates, determination, ninhydrin-carbon dioxide method, *Hamilton and Van Slyke*, 1943, 150, 231
- , carboxyl groups, determination, gasometric, *Van Slyke, Dillon, MacFadyen, and Hamilton*, 1941, 141, 627
- , determination, carbon dioxide reaction with ninhydrin, titration, *Van Slyke, MacFadyen, and Hamilton*, 1941, 141, 671
- Gorgonin, *Block and Bolling*, 1939, 127, 685
- Hair and horn, *Block*, 1939, 128, 181
- Hydroxy-, O-acetyl derivatives, preparation, *Sakami and Toennies*, 1942, 144, 203
- , activity, aqueous solution, *Smith and Smith*, 1940, 132, 57
- Hydroxy groups, acetylation, *Sakami and Toennies*, 1942, 144, 203
- —, determination, *Toennies and Kolb*, 1942, 144, 219
- Hydroxy-, ionization, aqueous solution, *Smith, Gorham, and Smith*, 1942, 144, 737
- , methylation, betaine formation, *Dakin*, 1941, 140, 847
- , silk proteins, *Nicolet and Saidel*, 1941, 139, 477
- Isomers, oxidation, pyrrole effect, *Bernheim, Bernheim, and Michel*, 1938, 126, 273
- Keratins, *Block and Bolling*, 1939, 127, 685
- L-, oxidase, tissue, *Green, Nocito, and Ratner*, 1943, 148, 461
- Lactobacillus arabinosus* nutrition, *Shankman*, 1943, 150, 305
- Liver, autolysis, *Luck, Eudin, and Nimmo*, 1939, 131, 201

Amino acid(s)—continued:

- Liver phospholipids, effect, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 135, 359
- Mercuric chloride, reaction, *Toennies and Kolb*, 1938, 126, 367
- Metabolism, *Abbott and Lewis*, 1939, 131, 479
- , 1941, 137, 535
- Butts and Sinnhuber*, 1941, 139, 963
- , 1941, 140, 597
- Remmert and Butts*, 1942, 144, 41
- , keto acid excretion, relation, *Waelch and Miller*, 1942, 145, 1
- N-Methyl-, activity, aqueous solution, *Smith and Smith*, 1940, 132, 57
- , oxidation, kidney and liver, *in vitro*, *Handler, Bernheim, and Klein*, 1941, 138, 203
- N-Methylated, metabolism, *Gordon*, 1939, 127, 487
- , 1939, 129, 309
- Milk protein, distribution, *Beach, Bernstein, Hoffman, Teague, and Macy*, 1941, 139, 57
- Multivalent, *Greenstein*, 1939, 128, 241
- Nitrogen, blood plasma, *Cramer and Winnick*, 1943, 150, 259
- isotopes, *Schoenheimer and Rittenberg*, 1939, 127, 285
- Nutrition, rôle, *Rose, Haines, and Johnson*, 1942, 146, 683
- Rose, Haines, Johnson, and Warner*, 1943, 148, 457
- Oxidation, kidney and liver, thyroid feeding, and thyroidectomy effect, *Klein*, 1939, 128, 659
- Racemization, acetylation with ketene, *Jackson and Cahill*, 1938, 126, 37
- Cahill and Burton*, 1940, 132, 161
- Reactions, titrimetry, non-aqueous, *Kolb and Toennies*, 1942, 144, 193
- Sakami and Toennies*, 1942, 144, 203
- Toennies and Kolb*, 1942, 144, 219
- Reagent, naphthalene- β -sulfonic acid, *Bergmann and Stein*, 1939, 129, 609
- Salts and, interaction, *Joseph*, 1939, 130, 203

Amino acid(s)—continued:

- Solution, calcium, barium, and strontium chloride activity determination, electrolytic, *Joseph*, 1939, 130, 203
- Solutions, thermodynamic properties, *Smith and Smith*, 1940, 132, 47, 57
1940, 135, 273
- Smith, Gorham, and Smith*, 1942, 144, 737
- Smith and Smith*, 1942, 146, 187
- Spongins, *Block and Bolling*, 1939, 127, 685
- Sulfonic acids, aromatic, reagents for, *Doherty, Stein, and Bergmann*, 1940, 135, 487
- Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- Sulfur, pituitary lactogenic hormone, *Li*, 1943, 148, 289
- Sulfur-containing, lipotropic action, *Singal and Eckstein*, 1941, 140, 27
- , wool, isolation, *Horn, Jones, and Ringel*, 1941, 138, 141
- ; —, synthesis, *du Vigneaud and Brown*, 1941, 138, 151
- Synthesis, isotopic nitrogen-containing, *Schoenheimer and Ratner*, 1939, 127, 301
- Tissue protein, *Beach, Munks, and Robinson*, 1943, 148, 431
- proteins, phenylpyruvic oligophrenia, *Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- Tobacco mosaic virus protein, determination, *Ross*, 1941, 138, 741
- — —, fractionation, *Ross*, 1942, 143, 685
- Turtle scutes, *Block and Bolling*, 1939, 127, 685
- Urine ammonia excretion, injection effect, *Bliss*, 1941, 137, 217
- , determination, ninhydrin-carbon dioxide method, *Van Slyke, MacFadyen, and Hamilton*, 1943, 150, 251
- Wool, *Block*, 1939, 128, 181
- Aminobenzoic acid:** *p*-, *Acetobacter suboxydans* growth factor, *Lampen, Underkofler, and Peterson*, 1942, 146, 277

Aminobenzoic acid—continued:

- p*-, blood, determination, *Eckert*, 1943, 148, 197
- , chromotrichial activity, *Martin and Ansbacher*, 1941, 138, 441
- , conjugated, blood, determination, *Eckert*, 1943, 148, 197
- , determination, *Kirch and Bergeim*, 1943, 148, 445
- , —, *Lactobacillus* use, *Lewis*, 1942, 146, 441
- , —, microbiological, *Landy and Dicken*, 1942, 146, 109
- Mitchell, Isbell, and Thompson*, 1943, 147, 485
- Thompson, Isbell, and Mitchell*, 1943, 148, 281
- , nicotinic acid determination, microbiological, effect, *Isbell*, 1942, 144, 567
- , oxidation, peroxidase and sulfanilamide effect, *Lipmann*, 1941, 139, 977
- , phenylaminobutyric acid acetylation *in vivo*, relation, *Fishman and Cohn*, 1943, 148, 610
- , yeast, isolation, *Blanchard*, 1941, 140, 919
- , *See also* Vitamin B complex
- Aminobutyryl-*l*-histidine:** γ -, synthesis, *Hunt and du Vigneaud*, 1939, 127, 43
- Aminocaproic acid:** ϵ -, ionization, aqueous solution, *Smith and Smith*, 1942, 146, 187
- Aminoethyl phosphate:** Hydrolysis, fecal and kidney phosphatase, *Bowers, Outhouse, and Forbes*, 1940, 132, 675
- Aminoethylphosphoric acid:** Metabolism, radioactive phosphorus isotope as indicator, *Chargaff and Keston*, 1940, 134, 515
- Amino group(s):** α -, histidine, activity, animals, *Schoenheimer, Rittenberg, and Keston*, 1939, 127, 385
- Acetylation and formylation, *Kolb and Toennies*, 1942, 144, 193
- Determination, *Van Slyke*, light effect, *Fraenkel-Conrat*, 1943, 148, 453

- Amino- β -methoxy acid(s):** α -, purification, β -phenethylamine use, *Carter and Risser*, 1941, 139, 255
- Amino-2-methylnaphthol:** 4-, sulfhydryl groups, oxidation, effect, *Bernheim and Bernheim*, 1940, 134, 457
- Amino-2-methyl-1-naphthol:** 4-, vitamin K activity, *Emmett, Kamm, and Sharp*, 1940, 133, 285
- Amino-3-methyl-1-naphthol:** 4-, vitamin K activity, *Emmett, Kamm, and Sharp*, 1940, 133, 285
- Amino-N-monomethyltryptophane:** *l*(+)- and *dl*-, growth availability, *Gordon*, 1939, 129, 309
- Amino nitrogen:** Anomalous values, *Carter and Dickman*, 1943, 149, 571
- Blood, determination, colorimetric, *Frame, Russell, and Wilhelm*, 1943, 149, 255
- Determination, gasometric, *Sandkuhle, Kirk, and Cunningham*, 1942, 146, 427
- , iodine use, *Dunn and Porush*, 1939, 127, 261
- , micro-, *Borsook and Dubnoff*, 1939, 131, 163
- , nitrous acid use, iodine and mercury effect, *Kendrick and Hanke*, 1940, 132, 739
- Formol drop titration, *Sisco, Cunningham, and Kirk*, 1941, 139, 1
- Free, liberation, *Van Slyke apparatus*, *Lieben and Loo*, 1942, 145, 223
- Liver extracts, cell-free, disappearance, *Ågren, Hammarsten, and Rosdahl*, 1939, 127, 541
- Amino-peptidase:** Chick embryo, *Lery and Palmer*, 1943, 150, 271
- Aminophenylacetic acid:** α -, alanine and, configurational correlation, *Kuna, Ovakimian, and Levene*, 1941, 137, 337
- Aminopurine:** 6-. See Adenine
- Aminopyridine:** Sulfanilyl-2-, urine excretion products, *Ratish, Bulloua, Ames, and Scudi*, 1939, 128, 279
- Amino- β -thiol-*n*-butyric acid(s):** α -, synthesis, *Carter, Stevens, and Ney*, 1941, 139, 247
- Ammonia:** Amino acid and creatine formation, animals, utilization, *Foster, Schoenheimer, and Rittenberg*, 1939, 127, 319
- Determination, colorimetric, thymol-hypobromite reagent, *Hansen and Nielsen*, 1939, 131, 309
- , micro-, *Borsook and Dubnoff*, 1939, 131, 163
- Formation, proteins, alkaline solution, *Warner and Cannan*, 1942, 142, 725
- Isotopic, glutathione metabolism, study with, *Waelch and Rittenberg*, 1942, 144, 53
- Nitrogen, tobacco plant, assimilation, nitrogen isotope in study, *Vickery, Pucher, Schoenheimer, and Rittenberg*, 1940, 135, 531
- Urine, excretion, amino acid injection effect, *Bliss*, 1941, 137, 217
- , glutamine as source, *Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller*, 1943, 150, 481
- Utilization, *Rittenberg, Schoenheimer, and Keston*, 1939, 128, 603
- Yeast nitrogen metabolism, effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- Ammonium chloride:** Kidney phospholipid and total phosphorus metabolism, effect, radioactive phosphorus as indicator, *Weissberger*, 1940, 132, 219
- Ammonium sulfate:** Pineapple hexosamine, uncombined, effect, *Sidcris, Young, and Krauss*, 1938, 126, 233
- Amylase:** β -, buffer effects, *Ballou and Luck*, 1941, 139, 233
- Blood, starch and glycogen hydrolysis, *Morris*, 1943, 148, 271
- Pancreas, *Little and Caldwell*, 1942, 142, 585
- , solubility, organic solvents, *Larsen and Poe*, 1940, 132, 129
- Wheat, starch, action, *Stamberg and Bailey*, 1938, 126, 479
- Anaphylactic shock:** Nitrogen metabolism, relation, *Miller*, 1940, 133, 93

- Androgenic substance(s):** Urine, characteristics, *Butz and Hall*, 1938, 126, 265
 —, extraction apparatus, *Neterval*, 1940, 133, 313
 —, ovariectomy effect, *Hirschmann*, 1939, 130, 421
- Androstanol-3(β)-one:** Urine, pregnancy, isolation, *Heard and McKay*, 1939, 131, 371
- Androstenetriol-3(β),16,17: Δ^5 -**, adrenocortical carcinoma, isolation, *Hirschmann*, 1943, 150, 363
- Androsterone:** Calibration curves, *Saier, Warga, and Grauer*, 1941, 137, 317
- Dehydroiso-** *See* Dehydroisoandrosterone
- Dehydroisoandrosterone** and, chromogenic effect, *Saier, Grauer, and Starkey*, 1943, 148, 213
- Determination,** spectrochemical, *Langstroth, Talbot, and Fineman*, 1939, 130, 585
- m-Dinitrobenzene reaction,** behavior, *Langstroth and Talbot*, 1939, 129, 759
- — compounds, absorption spectra, *Langstroth and Talbot*, 1939, 128, 759
- Etioallocholan-3,17-dione** conversion, *Dorfman*, 1940, 132, 457
- Iso-**, urine, isolation, *Pearlman*, 1940, 136, 807
- Sodium dehydroiso-**, sulfate, water and urine, determination, *Talbot, Ryan, and Wolfe*, 1943, 148, 593
- Testosterone** conversion, *Dorfman, Cook, and Hamilton*, 1939, 130, 285
- relation, *Dorfman and Hamilton*, 1940, 133, 753
- Androsterone sulfate:** Isolation, *Venning, Hoffman, and Browne*, 1942, 146, 369
- Anemia:** Anti-, vitamin, chick, *O'Dell and Hogan*, 1943, 149, 323
- Bone marrow lipids, effect, *Krause*, 1943, 149, 395
- Cholesterol-produced,** *Okey and Greaves*, 1939, 129, 111
- Anemia—continued:**
- Deaminized casein-produced, amino acid effect, *Guerrant and Hogan*, 1939, 128, 363
- —, lysine relation, *Hogan, Powell, and Guerrant*, 1941, 137, 41
- Dog,** *Potter, Elvehjem, and Hart*, 1938, 126, 155
- Feces** protoporphyrin IX, isolation, *Schultze*, 1942, 142, 89
- Fish,** factor, *Simmons and Norris*, 1941, 140, 679
- Hemorrhagic,** *McKibbin, Schaefer, Elvehjem, and Hart*, 1942, 145, 107
- Nutritional,** radioactive copper in study, *Schultze and Simmons*, 1942, 142, 97
- Pyridoxine-produced,** *McKibbin, Schaefer, Frost, and Elvehjem*, 1942, 142, 77
- Rickets,** relation, *Fuhr and Steenbock*, 1943, 147, 71
- Tissue iron,** *Austoni, Rabinovitch, and Greenberg*, 1940, 134, 17
- Vitamin deficiency** relation, chick, *Hogan and Parrott*, 1940, 132, 507
- Anesthesia:** Magnesium, adenosine triphosphate relation, *DuBois, Albaum, and Potter*, 1943, 147, 699
- Angiotonin:** Formation, enzymatic, renin and renin activator, *Plenil and Page*, 1943, 147, 135
- Anhydrase:** Carbonic. *See* Carbonic anhydrase
- Anoxia:** Liver metabolism, fasting, effect, *Craig*, 1943, 150, 209
- Anserine:** Muscle, determination, *Zapp and Wilson*, 1938, 126, 9, 19
- , species distribution, *Zapp and Wilson*, 1938, 126, 19
- Transmethylation** relation, *Schenck, Simmonds, Cohn, Stevens, and du Vigneaud*, 1943, 149, 355
- Anthracene:** Dibenz-, tissue vitamin A, effect, *Baumann, Foster, and Moore*, 1942, 142, 597
- Anthraquinone(s):** Polyhydroxy-, blood coagulation, vitamin K deficiency, effect, *Martin and Lischer*, 1941, 137, 169

- Antibiotin:** Factor, egg white, isolation, *Woolley and Longworth*, 1942, 142, 285
- Antibody:** -Antigen reaction, heat, *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 1941, 139, 787
- Pneumococcus specific polysaccharide, combination velocity, *Mayer and Heidelberger*, 1942, 143, 567
- Protein, nitrogen, dietary, immunity, effect, *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*, 1942, 144, 555
- , —, —, immunized animals, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 1942, 144, 545
- Anticatalase:** *Tria*, 1939, 129, 377
- Anticoagulant(s):** Blood plasma proteins, electrophoresis study, *Chargaff, Ziff, and Moore*, 1941, 139, 383
- Antigen:** Antibody-, reaction, heat, *Boyd, Conn, Gregg, Kistiakowsky, and Roberts*, 1941, 139, 787
- Hemolytic streptococcus, Lancefield Group A, structure, *Zittle and Harris*, 1942, 142, 823
- Pneumococcus, *Goebel, Shedlovsky, Lavin, and Adams*, 1943, 148, 1
- Tissue extract, chemical constitution, blood serum, syphilis diagnosis, *Brown and Kolmer*, 1941, 137, 525
- Antimony trichloride:** Sterols and vitamins D₂ and D₃, determination, use, *Zimmerli, Nield, and Russell*, 1943, 148, 245
- Antiserum:** Tobacco mosaic virus and, reaction, electron microscope study, *Anderson and Stanley*, 1941, 139, 339
- Antitoxin:** Diphtheria, papain effect, *Petermann*, 1942, 144, 607
- Apatite:** Hydroxy-, fluoride adsorption, radioactive isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543
- , phosphate adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*, 1941, 138, 451
- Aphid(s):** Glycogen, isolation and properties, *Loring and Pierce*, 1943, 148, 35
- Aphis brassicae:** See Aphid
- Apoferitin:** Roentgen ray diffraction, *Fankuchen*, 1943, 150, 57
- Spleen, *Granick and Michaelis*, 1943, 147, 91
- Apparatus:** Amino acid determination, ninhydrin reaction, *Christensen, West, and Dimick*, 1941, 137, 735
- Cataphoresis, *Coolidge*, 1939, 127, 551
- Chemical reactions, rapid, study, *DuBois*, 1941, 137, 123
- Colorimeter, photoelectric, test-tube, *Summerson*, 1939, 130, 149
- Drying and extraction, biological materials, *Kaye, Leibner, and Connor*, 1940, 132, 195
- Fecal fat, fractionation, *Kaye, Leibner, and Sobel*, 1941, 138, 643
- Gas, respiratory, determination, *Scholander*, 1942, 146, 159
- Haldane gas analysis, modified, *Bazett*, 1941, 139, 81
- Lipid extraction, *Kaye, Leibner, and Sobel*, 1941, 138, 643
- Manometer, injection, *Marsh and Carlson*, 1940, 136, 69
- Metabolism, manometer, *Summerson*, 1939, 131, 579
- Micrometer burette, *Scholander, Edwards, and Irving*, 1943, 148, 495
- Osmotic pressure, low, determination, *Bourdillon*, 1939, 127, 617
- Photometer, photoelectric, *Rosenfeld*, 1939, 129, 179
- Quartz fiber balance, *Lowry*, 1941, 140, 183
- Tissue liquefier, *Shelesnyak and Biskind*, 1942, 143, 663
- Ultrafiltration, *Coolidge*, 1940, 135, 541
- Urine androgenic substances, extraction, *Neterval*, 1940, 133, 313
- steroids, extraction, *Hershberg and Wolfe*, 1940, 133, 667
- 1941, 141, 215
- Araban:** Oats, *Morris*, 1942, 142, 881

- Arachidonic acid:** Chemical constitution, *Shinowara and Brown*, 1940, 134, 331
Mowry, Brode, and Brown, 1942, 142, 679
 Isolation, *Shinowara and Brown*, 1940, 134, 331
 Properties, crystallization and debromination preparation, comparison, *Shinowara and Brown*, 1940, 134, 331
- Arachin:** Cystine excretion, cystinuria, effect, *Hess and Sullivan*, 1942, 146, 381
- Arginase:** Liver, *Richards and Hellerman*, 1940, 134, 237
 —, adrenalectomy and adrenocortical steroids, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1943, 147, 99
 —, food effect, *Lightbody and Kleinman*, 1939, 129, 71
 —, kidney, and intestine, testosterone propionate effect, *Kochakian and Clark*, 1942, 143, 795
 Tumors, *Greenstein, Jenrette, Mider, and White*, 1941, 137, 795
- Arginine:** Blood serum proteins, ingestion effect, *Block*, 1940, 133, 71
 Citrulline conversion, kidney, *Borsook and Dubnoff*, 1941, 141, 717
 — replacement of, diet, effect, *Klose and Almquist*, 1940, 135, 153
 Determination, flavianic acid use, *Vickery*, 1940, 132, 325
 —, micro-, *Dubnoff*, 1941, 141, 711
 —, photometric, *Brand and Kassell*, 1942, 145, 359
 —, Sakaguchi reaction, *Thomas, Ingalls, and Luck*, 1939, 129, 263
 Hydrolysis, kinetics, *Warner*, 1942, 142, 705
 l(+)-, metabolism, *Butts and Sinnhuber*, 1941, 140, 597
 Nutrition, chick, rôle, *Hegsted, Briggs, Elvehjem, and Hart*, 1941, 140, 191
 Ornithine conversion, *Clutton, Schoenheimer, and Rittenberg*, 1940, 132, 227
 Pituitary pressor and oxytocic hormones, *Potts and Gallagher*, 1942, 143, 561
- Arginine—continued:**
 Vitamin B₄ deficiency, chick, effect, *Briggs, Luckey, Elvehjem, and Hart*, 1943, 150, 11
- Arsenate:** Carbohydrate breakdown, phosphopyruvic acid dephosphorylation, relation, *Meyerhof and Junowicz-Kocholaty*, 1942, 145, 443
- Arsenocholine chloride:** Dietary, effect, *Welch and Landau*, 1942, 144, 581
- Arthropod(s):** Blood serum nitrogen, copper, and hemocyanin, *Allison and Cole*, 1940, 135, 259
- Ascorbic acid:** Blood, blood plasma, and blood plasma filtrates, stability, *Golden and Garfinkel*, 1942, 144, 447
 —, determination, 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, use, *Roe and Kuether*, 1943, 147, 399
 —, —, methylene blue use, *Buller, Cushman, and MacLachlan*, 1943, 150, 453
 —, preservation, *Kassan and Roe*, 1940, 133, 579
- Citric acid and, metabolism,** *Purinton and Schuck*, 1943, 148, 237
- Deficiency, tissue enzyme activity, relation,** *Harrer and King*, 1941, 138, 111
- Dehydro-. See Dehydroascorbic acid**
- Determination, 2,6-dichlorophenol indophenol in xylene, use,** *Highet and West*, 1942, 146, 655
- , micro-,** *Bessey*, 1938, 126, 771
- Endocrines, avitaminosis influence,** *Sure, Theis, and Harrelson*, 1939, 129, 245
- Iminazole rings in vivo, effect,** *Greenblatt and Pecker*, 1940, 134, 341
- l-, 3,3'-methylenebis(4-hydroxycoumarin) action and prothrombin time, effect,** *Overman, Stahmann, and Link*, 1942, 145, 155
- Like reducing substance, blood buffy layer,** *Buller and Cushman*, 1941, 139, 219
- Methemoglobin reduction, effect,** *Vesling*, 1942, 143, 439
- Ninhydrin reaction,** *West and Rinehart*, 1942, 146, 105

Ascorbic acid—continued:

- Perspiration, *Tennent and Silber*,
1943, 148, 359
- Phenylalanine metabolism, rôle, *Sealock, Perkinson, and Basinski*,
1941, 140, 153
- Phospholipid oxidation, effect, *Deutsch, Kline, and Rusch*, 1941, 141, 529
- Synthesis, tissue, *Sutton, Kaeser, and Hansard*, 1942, 144, 183
- , —, *in vitro*, *Smythe and King*,
1942, 142, 529
- Tissue, animal, carrier rôle, *Schultze, Harrer, and King*, 1939, 131, 5
- , avitaminosis influence, *Sure, Theis, and Harrelson*, 1939, 129, 245
- Tyrosine metabolism, rôle, *Sealock, Perkinson, and Basinski*,
1941, 140, 153
- Urine, determination, colorimetric, *Evelyn, Malloy, and Rosen*,
1938, 126, 645
- , —, 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, use, *Roe and Kuether*,
1943, 147, 399

See also Vitamin C

- Ash: Bone, vitamin D effect, *Correll and Wise*, 1938, 126, 573
- Ashing: Tissue, soft, determination, *Buell*, 1939, 130, 357
- Asparagine: Formation, seedlings, etiolated, *Lupinus angustifolius*, *Vicia atropurpurea*, and *Cucurbita pepo*, *Vickery and Pucher*, 1943, 150, 197
- Glutamate, *Bacterium dysenteriae* and microorganisms, growth factor, *Bovarnick*, 1943, 148, 151
- Glutamic acid mixtures, nicotinamide-like substance, determination, *Bovarnick*, 1943, 149, 301
- Preparation, *Vickery, Pucher, and Deuber*, 1942, 145, 45
- Asparthione: Synthesis, *Miller, Behrens, and du Vigneaud*, 1941, 140, 411
- Aspartic acid(s): Analogue, glutathione, synthesis, *Miller, Behrens, and du Vigneaud*, 1941, 140, 411
- Corynebacterium diphtheriae*, configuration, *Chargaff*, 1939, 130, 29

Aspartic acid(s)—continued:

- Growth relation, *Rose and Fierke*,
1942, 143, 115
- Ionization, aqueous solution, *Smith and Smith*, 1942, 146, 187
- l(—), oxidation, *Hemophilus parainfluenzae*, *Klein*, 1940, 134, 43
- Methyl-, methylation, *Dakin*,
1941, 141, 945
- Phytomonas tumefaciens*, configuration, *Chargaff*, 1939, 130, 29
- Aspartylhistidine: *Greenstein and Klemperer*, 1939, 128, 245
- Aspergillus sydowi*: Mycelium, cerebrin isolation, *Bohonos and Peterson*,
1943, 149, 295
- Asphyxia: Blood serum potassium, effect, *Cattell and Civin*, 1938, 126, 633
- Astragalus pectinatus*: Selenium- and sulfur-containing amino acid complex, isolation, *Horn and Jones*,
1941, 139, 649
- Atabrine: Blood, determination, *Masen*,
1943, 148, 529
- Escherichia coli* growth, spermidine and polyamines, effect, *Silverman and Evans*, 1943, 150, 265
- Identification, distribution study, use, *Craig*, 1943, 150, 33
- Urine, determination, *Masen*,
1943, 148, 529
- Atisine: *Jacobs and Craig*, 1942, 143, 589
- Dihydro-, *Jacobs and Craig*,
1943, 147, 567
- Heter-, *Aconitum heterophyllum*, *Jacobs and Craig*, 1942, 143, 605
- , benzoyl, *Aconitum heterophyllum*, *Jacobs and Craig*, 1943, 147, 571
- Iso-, *Jacobs and Craig*, 1943, 147, 567
- Sodium hydroxide action, *Jacobs and Craig*, 1943, 147, 567
- Atmospheric pressure: Low, blood lipids, effect, *MacLachlan*, 1939, 129, 465
- Aucuba*: Mosaic virus protein, tomato roots, isolation, *Stanley*,
1938, 126, 125
- Autolysis: Cathepsin, effect, *Eder, Bradley, and Belfer*, 1939, 128, 551
- Oxidation, reduction, and sulphydryl, effect, *Bailey, Belfer, Eder, and Bradley*, 1942, 143, 721

- Autotrophic organism(s):** Chemical components, *Mazur and Clarke*, 1942, 143, 39
- Avena sativa:** See Oat
- Avidin:** Concentration, and determination, biological, *Eakin, Snell, and Williams*, 1941, 140, 535
- Stability, *György, Rose, and Tomarelli*, 1942, 144, 169
- Avitaminosis:** Endocrine and tissue ascorbic acid, influence, *Sure, Theis, and Harrelson*, 1939, 129, 245
- Avocado:** d-Mannoheptulose excretion, effect, *Blatherwick, Larson, and Sawyer*, 1940, 133, 643
- Azactone(s):** *Carter, Handler, and Melville*, 1939, 129, 359
- Carter and Stevens*, 1940, 133, 117
- Carter, Handler, and Stevens*, 1941, 138, 619
- Carter, Stevens, and Ney*, 1941, 139, 247
- Carter and Risser*, 1941, 139, 255
- Acetic acids, formation, *Carter and Stevens*, 1940, 133, 117
- Benzoyl- α -aminocinnamic acid, preparation, *Carter and Risser*, 1941, 139, 255
- Benzoyl- α -aminocrotonic acid, preparation, *Carter, Handler, and Melville*, 1939, 129, 359
- Carter and Stevens*, 1940, 133, 117
- Azolesterase:** Blood serum proteins, activity, *Glick, Glaubach, and Moore*, 1942, 144, 525
- Azotobacter:** Extracts, hydrogenase, *Lee, Wilson, and Wilson*, 1942, 144, 273
- Hydrogenase, properties, *Wilson, Lee, and Wilson*, 1942, 144, 265
- Azotobacter vinelandii:** Nitrogen, isotopic, distribution, *Burris*, 1942, 143, 509
- Bacillus brevis:** Cultures, bactericidal substances, isolation, *Hotchkiss and Dubos*, 1941, 141, 155
- Bacillus subtilis:** d(-)-Glutamic acid polypeptide formation by, *Bovarnick*, 1942, 145, 415
- Bacteria:** Anti-, glucose aerodehydrogenase from *Penicillium notatum*, *Birkinshaw and Raistrick*, 1943, 148, 459
- Autotrophic, adenosine-3-triphosphate, *LePage and Umbreit*, 1943, 148, 255
- , phosphorylated carbohydrate esters, *LePage and Umbreit*, 1943, 147, 263
- Blood nicotinamide and related substances, determination, use in, *Isbell, Woolley, Butler, and Sebrell*, 1941, 139, 499
- Carbon dioxide fixation, heavy carbon as tracer, *Wood, Werkman, Hemingway, and Nier*, 1940, 135, 789
- Colon. See Colon, bacteria
- Drosophila v⁺* hormone, identification, *Tatum and Haagen-Smit*, 1941, 140, 575
- Enzyme, mucin-hydrolyzing, *Robertson, Ropes, and Bauer*, 1940, 133, 261
- , preparation, acetylmethylcarbinol formation from pyruvic acid by, *Silverman and Werkman*, 1941, 138, 35
- Growth factors, *Woolley, McDaniel, and Peterson*, 1939, 131, 381
- Hutchings, Bohonos, and Peterson*, 1941, 141, 521
- Heterotrophic, heavy carbon dioxide assimilation, *Slade, Wood, Nier, Hemingway, and Werkman*, 1942, 143, 133
- , succinic acid synthesis by, carbon position in carbon dioxide, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 377
- Lactic acid, growth, glutamine and glutamic acid effect, *Pollack and Lindner*, 1942, 143, 655
- , —, manganese relation, *Woolley*, 1941, 140, 311

B

Bacteria—continued:

- Lactic acid, growth, purification and properties, *Hutchings, Bohonos, and Peterson*, 1941, 141, 521
- Metabolism, gramicidin and tyrocidine effect, *Dubos, Hotchkiss, and Coburn*, 1942, 146, 421
- , nicotinamide and related compounds, rôle, *Saunders, Dorfman, and Koser*, 1941, 138, 69
- Pyruvic acid metabolism, effect, *Baron and Lyman*, 1939, 127, 143
- Spinal fluid nicotinamide and related substances, determination, use in, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- Sucrose phosphorylase and synthesis, *Doudoroff, Kaplan, and Hassid*, 1943, 148, 67
- Urine nicotinamide and related substances, determination, use in, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- Vitamin C determination, use in, *Gunsalus and Hand*, 1941, 141, 853
- See also Acetobacter, Alcaligenes, etc.*
- Bacterial cultures: Hydrogen peroxide determination, *Main and Shinn*, 1939, 128, 417
- Bactericidal fraction(s): *Bacillus*, aerobic sporulating, *Hotchkiss and Dubos*, 1940, 136, 803
- Bactericidal substance(s): *Bacillus brevis* cultures, isolation, *Hotchkiss and Dubos*, 1941, 141, 155
- Bacterium coli*: Serine determination, rôle, *Chargaff and Sprinson*, 1943, 148, 249
- Bacterium dysenteriae*: Growth, asparagine-glutamate effect, *Bovarnick*, 1943, 148, 151
- Balance: Quartz fiber, *Lowry*, 1941, 140, 183
- Barium chloride: Activity determination, electrolytic, amino acid solutions, *Joseph*, 1939, 130, 203
- Basal metabolism: Pituitary, anterior, extract, and iodine, effect, *Gaebler and Bartlett*, 1939, 129, 559

- Base(s): Determination, *Dean and Fishman*, 1941, 140, 807
- Total, biological material, determination, electroanalysis, *Consolazio and Talbott*, 1940, 132, 753
- , blood, determination, *Leva and Guest*, 1939, 130, 777
- , — serum, determination, *Sunderman*, 1942, 143, 185
- Batyl alcohol: Natural, configuration, *Baer and Fischer*, 1941, 140, 397
- Bean: Castor, lipase, blood neutral fat, action, *Kelsey*, 1939, 130, 199
- , —, specificity, lipid analyses, *Kelsey*, 1939, 130, 187
- Jack, urease, canavanine removal, *Archibald and Hamilton*, 1943, 150, 155
- Soy, lipositol, isolation and chemical constitution, *Woolley*, 1943, 147, 581
- , lipoxidase, *Balls, Azelrod, and Kies*, 1943, 149, 491
- , urease, urea hydrolysis, activation energy, *Sizer*, 1940, 132, 209
- Benzaldehyde: Detoxication, animal body, *Stekol*, 1939, 128, 199
- Benzene: Bromo-, growth relation, *Stekol*, 1939, 127, 131
- p*-Bromo-, selenium excretion, administration effect, *Moxon, Schaefer, Lardy, DuBois, and Olson*, 1940, 132, 785
- N,N*-Dimethylaminoazo-, split-products, yeast carboxylase, effect, *Kensler, Young, and Rhoads*, 1942, 143, 465
- m*-Dinitro-, dehydroisoandrosterone and androsterone, reaction, *Langstroth and Talbot*, 1939, 129, 759
- Benzenesulfonate: Alkyl-, detergents, egg albumin, electrophoresis, *Lundgren, Elam, and O'Connell*, 1943, 149, 183
- Benzenesulfonyl derivative: Tobacco mosaic virus, *Miller and Stanley*, 1942, 146, 331
- Benzoic acid: *d*-Amino acid oxidase, effect, *Klein and Kamin*, 1941, 138, 507
- p*-Amino-. *See* Aminobenzoic acid

Benzoic acid—continued:

- p*-Nitro-, blood, determination, *Eckert*, 1943, 148, 197
- Oxidation, *Mycobacterium* effect, *Bernheim*, 1942, 143, 383
- Related substances, oxidation, *Mycobacterium* effect, *Bernheim*, 1942, 143, 383
- Benzoquinone:** Series, vitamin K activity, *Ansbacher and Fernholz*, 1939, 131, 399
- Benzoyl- α -aminocinnamic acid azlactone(s):** Preparation, *Carter and Risser*, 1941, 139, 255
- Benzoyl- α -aminocrotonic acid azlactone:** Preparation, *Carter, Handler, and Melville*, 1939, 129, 359
Carter and Stevens, 1940, 133, 117
- Benzoyl heteratisine:** *Aconitum heterophyllum*, *Jacobs and Craig*, 1943, 147, 571
- Benzpyrene:** Growth effect, *White and White*, 1939, 131, 149
- Benzyl alcohol:** Detoxication, animal body, *Stekol*, 1939, 128, 199
- Benzyl chloride:** Detoxication, animal body, *Stekol*, 1939, 128, 199
- Benzyl-L-cysteine:** Racemization, *Wood and du Vigneaud*, 1939, 130, 109
- Benzylhomocysteine:** S-, detoxication, animal body, *Stekol*, 1939, 128, 199
- Betacoccus arabinosaceus:** Dextran synthesis from sucrose and chemical constitution, *Hassid and Barker*, 1940, 134, 163
- Betaine:** Chemical constitution and transmethylation relation, *Moyer and du Vigneaud*, 1942, 143, 373
- Formation, hydroxyamino acid methylation, relation, *Dakin*, 1941, 140, 847
- Growth effect, chick, *Almqvist and Grau*, 1943, 149, 575
- Hippuric acid synthesis, availability, *Abbott and Lewis*, 1939, 131, 479
- Homocystine replacement of methionine, effect, *Chandler and du Vigneaud*, 1940, 135, 223
- Liver phospholipid metabolism, influence, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 130, 593

- Betaine aldehyde:** Oxidation, diphosphopyridine nucleotide effect, *Klein and Handler*, 1942, 144, 537
- Bicarbonate:** Pancreatic juice, source, *Ball, Tucker, Solomon, and Vennesland*, 1941, 140, 119
- Bicarbonate ion:** Muscle, distribution, *Wallace and Hastings*, 1942, 144, 637
- Bile:** Cholic and desoxycholic acid keto derivatives, determination, *Hughes*, 1942, 143, 11
- Cobalt distribution and excretion, radioactive isotope in study, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- Estrogens, estrone administration effect, *Longwell and McKee*, 1942, 142, 757
- Gallbladder, desiccated and normal, comparison, *Irvin, Merker, Anderson, and Johnston*, 1939, 131, 439
- Gizzard erosion, chick, effect, *Almqvist and Mecchi*, 1938, 126, 407
- Hepatic and gallbladder, choline, free, and phospholipid, *Johnston, Irvin, and Walton*, 1939, 131, 425
- Iron distribution and excretion, radioactive isotope in study, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- Manganese distribution and excretion, radioactive isotope in study, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- Renal fistulas, protoporphyrin fate, relation, *Watson, Pass, and Schwartz*, 1941, 139, 583
- Bile acid(s):** Acid strength, *Kumler and Halverstadt*, 1941, 137, 765
- Metabolism, *Schmidt and Hughes*, 1942, 143, 771
Schmidt, Hughes, Green, and Cooper, 1942, 145, 229
- Bile salt(s):** Solution, micelle formation, *Roepeke and Mason*, 1940, 133, 103
- Substitute, vitamin K, administration with, *Lozinski and Gottlieb*, 1940, 133, 635
- Bilirubin:** Blood plasma, blood cell, red, as source, *Barkan and Walker*, 1939, 131, 447

Biochemical reaction(s): Manometric diffusion, *Roughton*, 1941, 141, 129

Biochemical variables: Normal men, *Jellinek and Looney*, 1939, 128, 621

Biological fluid(s): Bone solubility, *Logan and Kane*, 1939, 127, 705

Biological material: Base, total, determination, electrodialysis, *Consolazio and Talbott*, 1940, 132, 753

Biological media: Levulose determination, diphenylamine use, *Corcoran and Page*, 1939, 127, 601

Bios: Factor, liver extract, *Alexander and Subbarow*, 1940, 135, 341

Yeast, nitrogen metabolism, effect, *Schultz, Atkin, and Frey*, 1940, 135, 267

Biotin: Anti-, factor, egg white, isolation, *Woolley and Longsworth*, 1942, 142, 285

Chemical constitution, *du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris*, 1942, 146, 475

Melville, Moyer, Hofmann, and du Vigneaud, 1942, 146, 487

Crystalline, free, preparation, *du Vigneaud, Hofmann, Melville, and Rachele*, 1941, 140, 763

Desthio-, biotin chemical constitution, relation, *du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris*, 1942, 146, 475

Determination, microbiological, *Shull, Hutchings, and Peterson*, 1942, 142, 913

Diaminocarboxylic acid from, 3,4-diaminotetrahydrothiophene stability, comparison, *Kilmer, Armstrong, Brown, and du Vigneaud*, 1942, 145, 495

— — —, phenanthrenequinone condensation, *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 1942, 145, 503

— — oxidation, adipic acid from, *Hofmann, Melville, and du Vigneaud*, 1942, 144, 513

Fat synthesis and metabolism, effect, *Gavin and McHenry*, 1941, 141, 619

Functional groups, *Hofmann, Melville, and du Vigneaud*, 1941, 141, 207

Biotin—continued:

Inactivation, fats, rancid, *Parcek and Shull*, 1942, 146, 351

— *in vitro*, egg white constituent, effect, *Eakin, Snell, and Williams*, 1940, 136, 801

Liver, isolation, *du Vigneaud, Hofmann, Melville, and György*, 1941, 140, 643

Milk, isolation, *Melville, Hofmann, Hague, and du Vigneaud*, 1942, 142, 615

Paralysis, effect, *Nielsen and Elvehjem*, 1942, 144, 405

Pyruvate metabolism, liver, effect, *Pilgrim, Axelrod, and Elvehjem*, 1942, 145, 237

Reagent effect, *Brown and du Vigneaud*, 1941, 141, 85

Streptococcus, hemolytic, growth factor, *Hottle, Lampen, and Pappenheimer*, 1941, 137, 457

Succinylsulfathiazole and, growth effect, *Nielsen and Elvehjem*, 1942, 145, 713

Thiophenevaleric acid from, *Melville, Moyer, Hofmann, and du Vigneaud*, 1942, 146, 487

See also Vitamin H

Biotin sulfone: Hydrolysis, *Melville, Hofmann, and du Vigneaud*, 1942, 145, 101

Bipyridine: 2,2', iron determination, spectrophotometric, use in, *Koenig and Johnson*, 1942, 143, 159

Bird: Blood cell, red, phytic acid, *Rapoport*, 1940, 135, 403

— iodine, seasonal variation, *Clarke and Boyd*, 1940, 135, 691

— lipids, sex hormones, crystalline, effect, *Entenman, Lorenz, and Chaikoff*, 1940, 134, 495

Lipid metabolism, endocrine control, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133

Lorenz, Chaikoff, and Entenman, 1938, 126, 763

Entenman, Lorenz, and Chaikoff, 1940, 134, 495

See also Chick

- Bismuth:** Biological material, determination, spectrochemical, *Steadman and Thompson*, 1941, 138, 611
- Bisulfite:** -Binding substances, blood pyruvic acid, relation, *Klein*, 1940, 135, 143
- —, urine, thiamine effect, *Shils, Day, and McCollum*, 1941, 139, 145
- Bisulfite reaction:** Acetone determination, microdiffusion, *Winnick*, 1941, 141, 115
- Diffusion, micro-, methods, *Winnick*, 1941, 141, 115
- 1942, 142, 451, 461
- Biuret reaction:** Blood serum protein, albumin, and globulin determination, use, *Kingsley*, 1939, 131, 197
- — —, determination, use, *Robinson and Hogden*, 1940, 135, 707, 727
- Blastomyces dermatitidis:** Lipids, *Peck and Hauser*, 1940, 134, 403
- Blood:** Acetaldehyde, determination, colorimetric, *Stotz*, 1943, 148, 585
- Acetoacetic acid, determination, bisulfite-binding method, *Klein*, 1940, 135, 143
- —, effect, *Stark and Somogyi*, 1943, 147, 319
- —, glucose effect, *Stark and Somogyi*, 1943, 147, 721
- —, insulin effect, *Stark and Somogyi*, 1943, 147, 731
- Acetoin, acetoin administration effect, *Greenberg*, 1943, 147, 11
- Acetone bodies, determination, *Barnes and Wick*, 1939, 131, 413
- Crandall*, 1940, 133, 539
- —, —, salicylaldehyde use, *Behre*, 1940, 136, 25
- —, determination, bisulfite-binding method, *Klein*, 1940, 135, 143
- Acidified, diphosphoglycerate decomposition, glycolysis relation, *Rapoport and Guest*, 1939, 129, 781
- Adrenalin, determination, *Bloor and Bullen*, 1941, 138, 727
- Alkali, buffer, determination, *Rubin*, 1938, 126, 679
- p*-Aminobenzoic and conjugated *p*-aminobenzoic acid, determination, *Eckert*, 1943, 148, 197
- Blood—continued:**
- Amino nitrogen determination, colorimetric, *Frame, Russell, and Wilhelm*, 1943, 149, 255
- Amylase, starch and glycogen hydrolysis, *Morris*, 1943, 148, 271
- Ascorbic acid determination, 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, use, *Roe and Kuether*, 1943, 147, 399
- — —, methylene blue use, *Builer, Cushman, and MacLachlan*, 1943, 150, 453
- — preservation, *Kassan and Roe*, 1940, 133, 579
- — stability, *Golden and Garfinkel*, 1942, 144, 447
- Atabrine, determination, *Masen*, 1943, 148, 529
- Base, total, determination, *Leva and Guest*, 1939, 130, 777
- Bisulfite-binding substances, pyruvic acid relation, *Klein*, 1940, 135, 143
- Bromide determination, *Friedman*, 1942, 144, 519
- Buffy layer, ascorbic acid-like reducing substance, *Butler and Cushman*, 1941, 139, 219
- Calcium, age effect, *Anderson and Elvehjem*, 1940, 134, 217
- distribution, *Snyder and Katzenbogen*, 1942, 143, 223
- Carbon dioxide, determination, gasometric, micro, *Scholander and Roughton*, 1943, 148, 573
- —, —, micro-, *West, Christensen, and Rinehart*, 1940, 132, 681
- — effect, *Cohn, Tannenbaum, Thalkimer, and Hastings*, 1939, 128, 109
- monoxide, determination, *Roughton*, 1941, 137, 617
- —, —, gasometric, *Horvath and Roughton*, 1942, 144, 747
- —, —, —, micro, *Scholander and Roughton*, 1943, 148, 551
- Carp, *Field, Elvehjem, and Juday*, 1943, 148, 261
- Cephalin, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671

Blood—continued:

- Cerebral, arterial-venous differences,
Gibbs, Lennox, Nims, and Gibbs,
 1942, 144, 325
- Nims, Gibbs, and Lennox*,
 1942, 145, 189
- , —, —, arterial carbon dioxide
 effect, *Nims, Gibbs, and Lennox*,
 1942, 145, 189
- Chloride, adrenalin injection effect,
MacVicar and Heller,
 1941, 137, 643
- , determination, micro-, titrimetric,
*Clark, Levitan, Gleason, and Green-
 berg*, 1942, 145, 85
- distribution, *Snyder and Katzenel-
 bogen*, 1942, 143, 223
- Cholesterol, ultraviolet irradiation
 effect, *Knudson, Sturges, and Bryan*,
 1939, 128, 721
- Cholinesterases, *Alles and Hawes*,
 1940, 133, 375
- Climate and season effect, *Dill, Wilson,
 and Robinson*, 1940, 136, 449
- Coagulation, chemistry, *Cohen and
 Chargaff*, 1940, 136, 243
- Chargaff, Ziff, and Cohen*,
 1940, 136, 257
- Ziff and Chargaff*, 1940, 136, 689
- Chargaff, Ziff, and Moore*,
 1941, 139, 383
- Cohen and Chargaff*, 1941, 139, 741
- , heparin action, *Ziff and Chargaff*,
 1940, 136, 689
- , lung thromboplastic protein,
 action, *Cohen and Chargaff*,
 1940, 136, 243
- , vitamin K deficiency, polyhydroxy-
 anthraquinones, effect, *Martin and
 Lischer*, 1941, 137, 169
- Coccarboxylase, determination, *Good-
 hart*, 1940, 135, 77
- , vitamin B₁ deficiency determina-
 tion, relation, *Goodhart and Sinclair*,
 1940, 132, 11
- Creatinine and creatine determination,
 colorimetric, *Peters*, 1942, 146, 179
- Diastase, health and diabetes, *Somogyi*,
 1940, 134, 315
- Dihydroxyacetone, determination,
Turner, Kress, and Harrison,
 1943, 148, 581

Blood—continued:

- Diodrast determination, colorimetric,
Flox, Pitesky, and Alving,
 1942, 142, 147
- Electrolyte and water exchange, *Munt-
 wyler, Mellors, Mautz, and Mangun*,
 1940, 134, 389
- equilibrium, adrenal insufficiency,
Muntwyler, Mellors, and Mautz,
 1940, 134, 345
- Electrolytes, dolphin, *Eichelberger,
 Fetcher, Geiling, and Vos*,
 1940, 133, 145
- Esterase, determination, micro-,
 adenocarcinoma, *Troeschler and
 Norris*, 1940, 132, 553
- Ethyl alcohol, determination, *Gettler
 and Umberger*, 1942, 143, 633
- —, —, colorimetric, *Gibson and
 Blotner*, 1938, 126, 551
- Extravascular fluid and, exchange
 rates, *Flechner, Gellhorn, and Merrell*,
 1942, 144, 35
- Fat, neutral, castor bean and pan-
 creatic lipase action, *Kelsey*,
 1939, 130, 199
- Feces, determination, colorimetric,
Andrews and Brooks, 1941, 138, 341
- Fructose, determination, skatole color
 reaction in, *Reinecke*, 1942, 142, 487
- Gases, determination, gasometric,
 micro, *Roughton and Scholander*,
 1943, 148, 541
- Scholander and Roughton*,
 1943, 148, 551
- Edwards, Scholander, and Roughton*,
 1943, 148, 565
- Scholander and Roughton*,
 1943, 148, 573
- Globins, sulfur, total, cystine, and
 methionine, species differences,
*Beach, Bernstein, Hummel, Wil-
 liams, and Macy*, 1939, 130, 115
- Glucose determination, micro-,
Reinecke, 1942, 143, 351
- injection effect, *Bueding and Gold-
 farb*, 1943, 147, 33
- Glucuronic acid, saccharoid relation,
Fashena and Stiff, 1941, 137, 21
- Glycerol determination, periodate use,
Voris, Ellis, and Maynard,
 1940, 133, 491

Blood—continued:

- Glycolysis, diphosphoglycerate decomposition relation, *Rapoport and Guest*, 1939, 129, 781
- , sodium fluoride and sodium iodacetate effect, *Bueding and Goldfarb*, 1941, 141, 539
- Group A specific substance, pneumococcus Type XIV polysaccharide, capsular, relation, *Goebel, Beeson, and Hoagland*, 1939, 129, 455
- Hemoglobin, diurnal variations, *McCarthy and Van Slyke*, 1939, 128, 567
- , inactive, *Ammundsen*, 1941, 138, 563
- Hydrogen ion concentration, carbohydrate storage and mobilization, effect, *Guest and Rawson*, 1941, 139, 535
- β -Hydroxybutyric acid, effect, *Stark and Somogyi*, 1943, 147, 319
- , glucose effect, *Stark and Somogyi*, 1943, 147, 721
- , insulin effect, *Stark and Somogyi*, 1943, 147, 731
- to acetoacetic acid ratio, Primates, *Friedemann*, 1942, 142, 635
- Inulin determination, colorimetric, *Alving, Rubin, and Miller*, 1939, 127, 609
- Iodide determination, colorimetric, *Flox, Pitesky, and Alving*, 1942, 142, 147
- Iodine, birds, seasonal variation, *Clarke and Boyd*, 1940, 135, 691
- , determination, micro-, permanganate acid ashing method, *Riggs and Man*, 1940, 134, 193
- , fractionation, *Bruger and Member*, 1943, 148, 77
- , —, alcohol, *Boyd and Clarke*, 1942, 142, 619
- , nature, *Trevorrow*, 1939, 127, 737
- , —, *Riggs, Laviates, and Man*, 1942, 143, 363
- Iron determination, micro-, *Breuer and Militzer*, 1938, 126, 561
- Keto acids, determination, *Friedemann and Haugen*, 1943, 147, 415
- Ketones. See also Ketonemia.

Blood—continued:

- Lactate, diabetes, glucose and insulin effect, *Klein*, 1942, 145, 35
- injection effect, *Bueding and Goldfarb*, 1943, 147, 33
- Lactate-pyruvate, thiamine deficiency, relation, *Stoltz and Bessey*, 1942, 143, 625
- Lactic acid determination, blood collection, *Friedemann and Haugen*, 1942, 144, 67
- , —, *Plasmodium knowlesi* effect, *Wendel and Kimball*, 1942, 145, 343
- acid-pyruvic acid ratio, exercise effect, *Friedemann and Barborka*, 1941, 141, 993
- Lactobacillus casei* e-stimulatory substance, *Feeney and Strong*, 1942, 142, 961
- Lead, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239
- Lecithin, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
- Levulose determination, diphenylamine use, *Corcoran and Page*, 1939, 127, 601
- Lipids, atmospheric pressure, low, exposure, effect, *MacLachlan*, 1939, 129, 465
- , bird, sex hormones, crystalline, effect, *Entenman, Lorenz, and Chaikoff*, 1940, 134, 495
- , chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
- , fasting and undernutrition effect, *Entenman, Changus, Gibbs, and Chaikoff*, 1940, 134, 59
- , fowl, estrin effect, *Lorenz, Chaikoff, and Entenman*, 1938, 126, 763
- , overnutrition effect, *Entenman and Chaikoff*, 1942, 142, 129
- , pancreatectomy and duct ligation with insulin, pancreatic juice ingestion effect, *Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
- , pancreatic duct ligation, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329

Blood—continued:

- Lipids, pancreatic duct ligation, effect, *Entenman, Chaikoff, and Montgomery*, 1939, 130, 121
- , pregnancy blood serum, fowl, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
- Magnesium distribution, *Snyder and Katzenelbogen*, 1942, 143, 223
- Methemoglobin, determination, micro-, *Evelyn and Malloy*, 1938, 126, 655
- 2-Methyl-1,4-naphthoquinone and, reactions, *Scudi and Buhs*, 1942, 144, 599
- Muscle and, electrolyte and water exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- Negroes, climate and season, effect, *Dill, Wilson, Hall, and Robinson*, 1940, 136, 449
- Nicotinamide and related substances, determination, bacterial, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 490
- Nicotinic acid, determination, enzymatic, *Allinson*, 1943, 147, 785
- —, factors affecting, *Melnick, Robinson, and Field*, 1940, 136, 157
- —, mammals, *Pearson*, 1939, 129, 491
- p-Nitrobenzoic acid, determination, *Eckert*, 1943, 148, 197
- Nitrogen, determination, gasometric, micro, *Edwards, Scholander, and Roughton*, 1943, 148, 565
- Nitrous oxide solubility, *Cullen and Cook*, 1943, 147, 23
- Oxygen, determination, gasometric, micro, *Roughton and Scholander*, 1943, 148, 541
- effect, *Cohn, Tannenbaum, Thalhimer, and Hastings*, 1939, 128, 109
- saturation, determination, colorimetric, micro, *Lowry, Smith, and Cohen*, 1942, 146, 519
- —, —, spectroscopic, *Hall*, 1939, 130, 573
- Oxyhemoglobin, determination, micro-, *Evelyn and Malloy*, 1938, 126, 655

Blood—continued:

- Pantothenic acid, *Wright*, 1943, 147, 261
- —, determination, *Stanbery, Snell, and Spies*, 1940, 135, 353
- —, glucose administration effect, *Wright*, 1942, 142, 445
- —, Mammalia, *Pearson*, 1941, 140, 423
- Parathyroid hormone effect, *Logan*, 1939, 127, 711
- Phenols, determination, ether extraction, *Schmidt*, 1943, 150, 69
- Phenylalanine, phenylpyruvic oligophrenia, *Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Phosphatase, perosis, chick, *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 1939, 127, 411
- Phospholipids, contaminants, *Christensen*, 1939, 129, 531
- , determination, *Marenzi and Cardini*, 1943, 147, 371
- —, micro-, *Erickson, Arrin, Teague, and Williams*, 1940, 135, 671
- , ether-insoluble, *Sinclair and Dolan*, 1942, 142, 659
- , jaundice effect, *Weil and Russell*, 1942, 144, 307
- Phosphorus, adrenalin injection effect, *Mac Vicar and Heller*, 1941, 137, 643
- , age effect, *Anderson and Elvehjem*, 1940, 134, 217
- , inorganic, distribution, *Snyder and Katzenelbogen*, 1942, 143, 223
- turnover, tissue, calcified, mineral metabolism relation, radioactive phosphorus as indicator, *Manly, Hodge, and Manly*, 1940, 134, 293
- Phytate phosphorus determination, *Lera and Rapoport*, 1941, 141, 343
- Pneumonia, oxygen and carbon dioxide effect, *Cohn, Tannenbaum, Thalhimer, and Hastings*, 1939, 128, 109
- Potassium, determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*, 1942, 145, 85
- distribution, *Snyder and Katzenelbogen*, 1942, 143, 223

Blood—continued:

- Preservation, carbon dioxide effect, *Smith, Tuihill, Drew, and Scudder*, 1940, 133, 499
- Protein, tuberculosis, electrophoresis study, *Seibert and Nelson*, 1942, 143, 29
- See also Hypoproteinemia
- Proteins, nitrogen, dietary, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 1942, 144, 541
- Protoporphyrin, determination, photoelectric and fluorophotometric, *Grinstein and Watson*, 1943, 147, 675
- Purine nucleotides and nucleosides, determination, *Kerr*, 1940, 132, 147
- Pyruvate, diabetes, glucose and insulin effect, *Klein*, 1942, 145, 35
- , glucose ingestion and thiamine deficiency, effect, *Bueding, Stein, and Wortis*, 1941, 140, 697
- injection effect, *Bueding and Goldfarb*, 1943, 147, 33
- Pyruvate-lactate, thiamine deficiency, relation, *Stotz and Bessey*, 1942, 143, 625
- Pyruvic acid, bisulfite-binding substances, relation, *Klein*, 1940, 135, 143
- , determination, acetoacetic acid effect, *Klein*, 1941, 137, 311
- , —, blood collection, *Friedemann and Haugen*, 1942, 144, 67
- , —, *Plasmodium knowlesi* effect, *Wendel and Kimball*, 1942, 145, 343
- , —, removal *in vitro*, *Bueding and Goodhart*, 1941, 141, 931
- , —, stabilization and determination, *Bueding and Wortis*, 1940, 133, 585
- Quinine determination, micro-, *Kyker, Webb, and Andrews*, 1941, 139, 551
- Regeneration, riboflavin effect, *Spector, Maass, Michaud, Elvehjem, and Hart*, 1943, 150, 75
- Riboflavin, *Strong, Feeney, Moore, and Parsons*, 1941, 137, 363
- Saccharoid, *Fashena and Stiff*, 1941, 137, 21
- Sex hormones, male, *McCullagh and Osborn*, 1938, 126, 299

Blood—continued:

- Sodium, determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*, 1942, 145, 85
- distribution, *Snyder and Katzenelbogen*, 1942, 143, 223
- pentothal determination, *Hellman, Shettles, and Stran*, 1943, 148, 293
- Sphingomyelin, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
- Sulfanilamide administration effect, *Webb and Kniazuk*, 1939, 128, 511
- *Wendel, Wendel, and Coz*, 1939, 131, 177
- Sulfhemoglobin, determination, micro-, *Evelyn and Malloy*, 1938, 126, 655
- Trout, *Field, Elvehjem, and Juday*, 1943, 148, 261
- Tryptophane deficiency, effect, *Albanese, Holt, Kajdi, and Frankston*, 1943, 148, 299
- Urea, determination, *Howell*, 1939, 129, 641
- , —, chick, *Howell*, 1939, 128, 573
- , —, colorimetric, *Ormsby*, 1942, 146, 595
- nitrogen, determination, *Genitzkow*, 1942, 143, 531
- Uric acid determination, uricase use, *Blauch and Koch*, 1939, 130, 443
- , —, diet effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
- , —, *in vitro*, uricase use, *Blauch and Koch*, 1939, 130, 455
- Vitamin A, visual test relation, *Pett and LePage*, 1940, 132, 585
- Water, determination, distillation method, *Miller*, 1942, 143, 65
- , dolphin, *Eichelberger, Fletcher, Geiling, and Vos*, 1940, 133, 145
- equilibrium, adrenal insufficiency, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
- , extravascular fluid and, exchange, *Fleznar, Gellhorn, and Merrell*, 1942, 144, 35
- Xanthine oxidase, *Blauch, Koch, and Hanke*, 1939, 130, 471
- See also Hematopoietic activity

Blood cell(s): Diphosphoglycerate and adenosine triphosphate, rickets, *Rapoport and Guest*, 1938, 126, 749

Electrolyte equilibrium, diphosphoglyceric acid rôle, pyloric obstruction effect, *Rapoport and Guest*, 1939, 131, 675

Flavin adenine dinucleotide synthesis from riboflavin, *Klein and Kohn*, 1940, 136, 177

Glyceric acid, phosphorylated, formation, species variation, *Rapoport and Guest*, 1942, 143, 671

Nicotinic acid determination, *Klein, Perlzweig, and Handler*, 1942, 145, 27

Phosphorus, acid-soluble, vertebrates, *Rapoport and Guest*, 1941, 138, 269

—, organic acid-soluble and inorganic, rickets, *Rapoport and Guest*, 1938, 126, 749

Potassium transfer, *Danowski*, 1941, 139, 693

Red, acetaldehyde, *Barker*, 1941, 137, 783

—, avian, phytic acid, *Rapoport*, 1940, 135, 403

—, blood plasma and, chlorides, adaptation syndrome effect, *Karady, Selye, and Browne*, 1939, 131, 717

—, — — iron and bilirubin, source, *Barkan and Walker*, 1939, 131, 447

—, calcium, *Streef*, 1939, 129, 661

—, cations, potassium-low diet and desoxycorticosterone effect, *Hegnauer*, 1943, 150, 353

—, coenzyme I, nicotinic acid deficiency effect, *Axelrod, Spies, and Elvehjem*, 1941, 138, 667

—, cozymase synthesis from nicotinic acid, effect, *Kohn and Klein*, 1939, 130, 1

—, — —, mechanism, nicotinic acid and nicotinamide effect, *Handler and Kohn*, 1943, 150, 447

—, density and hemoglobin relation, *Ponder*, 1942, 144, 333

—, differentiation, pseudohemoglobin use in, *Barkan and Walker*, 1940, 135, 803

Blood cell(s)—continued:

Red, factor V synthesis from nicotinic acid, effect, *Kohn and Klein*, 1939, 130, 1

—, — — from nicotinic acid, *in vitro*, effect, *Kohn and Klein*, 1940, 135, 685

—, hemoglobin, iron, radioactive, relation, *Miller and Hahn*, 1940, 134, 585

—, hydrogen ion concentration determination, spectrophotometric, *Drabkin and Singer*, 1939, 129, 739

—, inorganic components, *Solomon, Hald, and Peters*, 1940, 132, 723

—, lipids, lipemia, diabetic and alimentary, *Rubin*, 1939, 131, 691

—, non-hemolyzed, absorption spectra, *Drabkin and Singer*, 1939, 129, 739

—, permeability, chloride, radioactive, bromide, and iodide, *Smith, Eisenman, and Winkler*, 1941, 141, 555

—, —, potassium, sodium, and phosphate, inorganic, radioactive isotopes in study, *Eisenman, Ott, Smith, and Winkler*, 1940, 135, 165

—, —, sodium and potassium, *Kurnick*, 1941, 140, 581

—, phytase, vertebrates, *Rapoport, Leva, and Guest*, 1941, 139, 621

—, phytate, lipids, and nucleoproteins, phosphorus exchange, *Rapoport, Leva, and Guest*, 1941, 139, 633

—, posthemolytic residue, amino acids, *Beach, Erickson, Bernstein, Williams, and Macy*, 1939, 128, 339

—, potassium, metabolism effect, *Harris*, 1941, 141, 579

—, pyridine nucleotide synthesis from nicotinic acid, *in vitro*, effect, *Kohn and Klein*, 1940, 135, 685

—, sodium, *Streef*, 1939, 129, 661

—, stroma, sphingomyelin, *Thannhauser, Setz, and Benotti*, 1938, 126, 785

White. *See also* Leucemia, Leucopenia, Leucosis

Blood filtrate(s): Amino acids, free, determination, ninhydrin-carbon dioxide method, *Hamilton and Van Slyke*, 1943, 150, 231

Blood plasma: Amino acid nitrogen,*Cramer and Winnick*, 1943, 150, 259— retention, hypoproteinemia, liver function, relation, *Goettsch, Lyttle, Grim, and Dunbar*,

1942, 144, 121

— acids, determination, ninhydrin-carbon dioxide reaction, *MacFadyen*,

1942, 145, 387

Ascorbic acid stability, *Golden and Garfinkel*,

1942, 144, 447

Bilirubin, blood cell, red, as source,

Barkan and Walker, 1939, 131, 447Blood cell, red, and, chlorides, adaptation syndrome effect, *Karady, Selye, and Browne*,

1939, 131, 717

Cephalins, *Arlom*,

1941, 139, 65

Diiodotyrosine turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*,

1941, 140, 603

Electrophoresis measurements, *Moore and Lynn*,

1941, 141, 819

Fatty acids, distribution and characterization. *Kelsey and Longenecker*,

1941, 139, 727

Filtrates, ascorbic acid stability, *Golden and Garfinkel*,

1942, 144, 447

Glutamine-like substance, *Hamilton*,

1942, 145, 711

Glycoprotein, mammary gland, lactating, utilization, *Reineke, Williamson, and Turner*,

1941, 138, 83

Hemoglobin and heme pigments, determination, *Flink and Watson*,

1942, 146, 171

Heparin complement, electrophoresis study, *Chargaff, Ziff, and Moore*,

1941, 139, 383

Inulin determination, colorimetric, *Steinitz*,

1938, 126, 589

Iron, blood cell, red, as source, *Barkan and Walker*,

1939, 131, 447

Lipids, lipemia, diabetic and alimentary, *Rubin*,

1939, 131, 691

—, petroleum ether extracts, nitrogenous contaminants, *Folch and Van Slyke*,

1939, 129, 539

—, species variation, *Boyd*,

1942, 143, 131

Blood plasma—continued:2-Methyl-1,4-naphthoquinone and, reactions, *Scudi and Buhs*,

1942, 144, 599

Muscle and, electrolyte and water exchange, *Mellors, Muntwyler, and Mautz*,

1942, 144, 773

Nicotinic acid determination, *Klein, Perlzweig, and Handler*,

1942, 145, 27

Phosphatase, embryonic and tumor growth, effect, *Weil*,

1941, 138, 375

—, fat metabolism, relation, *Weil and Russell*,

1940, 136, 9

—, jaundice effect, *Weil and Russell*,

1942, 144, 307

Phospholipids, choline-containing and total, *Arlom*,

1941, 139, 65

—, dietary fat effect, *Arlom and Freeman*,

1940, 135, 59

—, diethylstilbestrol effect, *Flock and Bollman*,

1942, 144, 571

—, formation site, radioactive phosphorus in study, *Fishler, Entenman, Montgomery, and Chaikoff*,

1943, 150, 47

Phytase, vertebrates, *Rapoport, Leva, and Guest*,

1941, 139, 621

Potassium determination, micro-, chloroplatinate precipitation, *Tenery and Anderson*,

1940, 135, 659

Proteins, anticoagulants, electrophoresis study, *Chargaff, Ziff, and Moore*,

1941, 139, 383

Proteolysis, tumor or embryonic growth, *Weil and Russell*,

1938, 126, 245

Prothrombin, hemorrhagic concentrate determination by, sweet clover disease, *Campbell, Smith, Roberts, and Link*,

1941, 138, 1

—, 3,3'-methylenebis(4-hydroxycoumarin), effect, *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*,

1942, 142, 941

—, sulfaguanidine effect, *Black, Overman, Elvehjem, and Link*,

1942, 145, 137

Thiocyanate, dehydration effect, *Mellors, Muntwyler, Mautz, and Abbott*,

1942, 144, 785

Blood plasma—continued:

- Thyroxine turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*, 1941, 140, 603
- Ultrafiltrates, cystine and sulfur distribution, *l*-cystine and *dl*-methionine administration effect, *Brown and Lewis*, 1941, 138, 717
- , sulfur distribution, *Brown and Lewis*, 1941, 138, 705
- Uric acid, determination, *Bulger and Johns*, 1941, 140, 427
- Volume, dehydration effect, *Mellors, Muntwyler, Mautz, and Abbott*, 1942, 144, 785
- , determination, *Saifer, Hughes, and Weiss*, 1942, 146, 527
- Blood pressure:** Reduction, renal hypertension, kidney extracts, effect, *Grollman, Williams, and Harrison*, 1940, 134, 115
- Blood serum:** Albumin, carbon suboxide-treated, ultracentrifugal behavior, *Oncley, Ross, and Tracy*, 1941, 141, 797
- , crystalline, catalase inhibition effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
- , —, fractions, electrophoresis, *Sharp, Cooper, Erickson, and Neurath*, 1942, 144, 139
- , crystallization, *Kendall*, 1941, 138, 97
- , denaturation, *Neurath and Saum*, 1939, 128, 347
- , — and reversal, *Neurath, Cooper, and Erickson*, 1942, 142, 249
- , determination, *Robinson, Price, and Hogden*, 1938, 126, 207, 213
- , —, biuret reaction, *Kingsley*, 1939, 131, 197
- , —, colorimetric, *Looney and Walsh*, 1939, 130, 635
- , —, filter paper protein adsorption, effect, *Harris*, 1939, 127, 751
- , diffusion and viscosity measurements, urea presence, *Neurath and Saum*, 1939, 128, 347
- , iodinated, thyroid, effect, *Muus, Coons, and Salter*, 1941, 139, 135

Blood serum—continued:

- Albumin, malonyl, chymotryptic digestion, *Ross and Tracy*, 1942, 145, 19
- , methionine absence, *Brand and Kassell*, 1941, 141, 999
- , separation, *Kingsley*, 1940, 133, 731
- , sulfhydryl groups, *Greenstein*, 1940, 136, 795
- Base, total, determination, *Sunderman*, 1942, 143, 185
- Calcium, determination, micro-, *Sobel and Sobel*, 1939, 129, 721
- Sendroy*, 1942, 144, 243
- Calcium-protein relationship, alkalosis effect, *Yannet*, 1941, 137, 409
- —, calcium and phosphate salts, effect, ultracentrifuge studies, *Masket, Chanutin, and Ludewig*, 1942, 143, 763
- —, ultracentrifuge studies, *Ludewig, Chanutin, and Masket*, 1942, 143, 753
- Catalase inhibition, effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
- Cephalin, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
- Cholesterol esters, enzyme synthesis and hydrolysis, *Sperry and Stoyanoff*, 1938, 126, 77
- Colloid osmotic pressure, ultraviolet radiation, effect, *Davis, Hollaender, and Greenstein*, 1942, 146, 663
- Complement, separation, *Ecker, Pillemmer, Jones, and Seifter*, 1940, 135, 347
- Copper, arthropods, *Allison and Cole*, 1940, 135, 259
- Electrolytes, *Sunderman*, 1942, 143, 185
- , sodium bicarbonate-induced alkalosis, *Kirsner*, 1942, 145, 219
- Electrophoretic patterns, ultraviolet radiation, effect, *Davis, Hollaender, and Greenstein*, 1942, 146, 663
- Fractionation, ammonium sulfate and water dialysis, electrophoresis, *Svensson*, 1941, 139, 805

Blood serum—continued:

- Globulin, determination, *Robinson, Price, and Hogden*, 1938, 126, 207, 213
- , —, biuret reaction, *Kingsley*, 1939, 131, 197
- , —, colorimetric, *Looney and Walsh*, 1939, 130, 635
- , partition, *Reineke, Peterson, and Turner*, 1939, 128, 1
- precipitation by sodium sulfate, *Robinson, Price, and Hogden*, 1938, 126, 213
- , separation, *Kingsley*, 1940, 133, 731
- Gonadotropin, pregnancy, enzymes, effect, *Evans and Hauschildt*, 1942, 145, 335
- Hemocyanin, arthropods, *Allison and Cole*, 1940, 135, 259
- 7(β)-Hydroxycholesterol, pregnancy, isolation, *Wintersteiner and Ritzmann*, 1940, 136, 697
- Inulin determination, photometric, micro, *Ranney and McCune*, 1943, 150, 311
- Iron, determination, *o*-phenanthroline use, *Barkan and Walker*, 1940, 135, 37
- Lecithin, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
- Lipid-free, electrophoresis, *Bliz*, 1941, 137, 495
- Lipids, schizophrenia, testosterone effect, *Randall*, 1940, 133, 137
- , testosterone effect, *Looney and Romanoff*, 1940, 136, 479
- Lipoid-thiocyanate, *Rosenbaum and Laviates*, 1939, 131, 663
- Nitrogen, arthropods, *Allison and Cole*, 1940, 135, 259
- Pancreas lipase activation, effect, *Rabinowitch and Wynne*, 1938, 126, 109
- Particles, microscopic, electrophoresis, *Moyer and Moyer*, 1940, 132, 373
- Phosphatase, acid and alkaline, determination, *Shinowara, Jones, and Reinhart*, 1942, 142, 921
- , —, determination, *Gutman and Gutman*, 1940, 136, 201

Blood serum—continued:

- Phosphatase, alkaline, hypophysectomy effect, *Jones and Shinowara*, 1942, 142, 935
- , magnesium-deficient diet, effect, *Snyder and Tweedy*, 1942, 146, 639
- , vitamin D effect, *Correll and Wise*, 1938, 126, 581
- Phosphate, inorganic, determination, *Shinowara, Jones, and Reinhart*, 1942, 142, 921
- , —, hypophysectomy effect, *Jones and Shinowara*, 1942, 142, 935
- Phosphorus, glucose, galactose, and xylose effect, *Free and Leonards*, 1943, 149, 203
- Potassium, asphyxia effect, *Cattell and Civin*, 1938, 126, 633
- , determination, *Consolazio and Talbot*, 1938, 126, 55
- , —, micro-, electro dialysis, *Sobel, Hanok, and Kramer*, 1942, 144, 363
- , extracellular fluid and sodium depletion, effect, *Miller*, 1943, 147, 121
- Pregnancy, blood and liver lipids, fowl, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
- Protein, *Kendall*, 1941, 138, 97
- and calcium relationship, alkalosis effect, *Yannet*, 1941, 137, 409
- , casein and casein digest effect, *Mueller, Kemmerer, Cox, and Barnes*, 1940, 134, 573
- , non-antigenic, preparation, *Arnow, Kazal, and De Falco*, 1942, 145, 347
- , specific gravity relation, *Schousboe*, 1939, 129, 371
- , total, determination, biuret reaction, *Kingsley*, 1939, 131, 197
- Proteins, amino acids, basic, *Block*, 1940, 133, 71
- , analysis, *Murrill, Block, and Newburgh*, 1940, 133, 521
- , arginine ingestion effect, *Block*, 1940, 133, 71
- , azolesterase activity, *Glick, Glaubach, and Moore*, 1942, 144, 525

Blood serum—continued:

- Proteins, determination, biuret reaction use, *Robinson and Hogden*, 1940, 135, 707, 727
- , —, gravimetric, *Robinson and Hogden*, 1941, 140, 853
- , electrophoresis, *Sharp, Cooper, and Neurath*, 1942, 142, 203
- Sharp, Cooper, Erickson, and Neurath*, 1942, 144, 139
- , electrophoretically separated, lipids and polysaccharides, *Bliz, Tiselius, and Svensson*, 1941, 137, 485
- , fractionation, electrophoretic and sodium sulfate methods, *Taylor and Keys*, 1943, 148, 379
- , phenol red absorption curve, effect, *Robinson and Hogden*, 1941, 137, 239
- , quartz and collodion particles, electric mobilities, film formation, relation, *Moyer and Gorin*, 1940, 133, 605
- Pseudoglobulin, denaturation and reversal, *Neurath, Cooper, and Erickson*, 1942, 142, 265
- GI, electrophoresis, *Sharp, Cooper, and Neurath*, 1942, 142, 203
- , papain effect, *Petermann*, 1942, 144, 607
- Sodium, determination, phosphorus effect, *Hald*, 1939, 130, 133
- , —, spectrochemical, *Steadman*, 1941, 138, 603
- Specific gravity determination, Krogh syringe, protein relation, *Schousboe*, 1939, 129, 371
- Sphingomyelin, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
- Sulphydryl groups, *Greenstein*, 1940, 136, 795
- Syphilis diagnosis, tissue extract antigenic substance, chemical constitution, *Brown and Kolmer*, 1941, 137, 525
- Thiocyanate determination, thiocyanate salts, administration effect, *Ginsburg and Benotti*, 1939, 131, 503

Blood serum—continued:

- dl- α -Tocopherol*, determination, photoelectric, *Mayer and Sobotka*, 1942, 143, 695
- Turbid, extinction-wave-length relation, *Gaebler*, 1943, 149, 251
- Viscosity, ultraviolet radiation, effect, *Davis, Hollaender, and Greenstein*, 1942, 146, 663
- Blood sugar:** Determination, *Folin-Malmros*, adaptation to photoelectric colorimeter, *Horvath and Knehr*, 1941, 140, 869
- , *o*-phenanthroline ferrous complex as indicator, *MacFadyen and Van Slyke*, 1943, 149, 527
- Galactose effect, *Darby and Day*, 1940, 133, 503
- Glucose-1-phosphate, relation, *Cori, Cori, and Schmidt*, 1939, 129, 629
- Temperature effect, glucose and starch administration, *Rafferty and MacLachlan*, 1941, 140, 167
- Xylose effect, *Darby and Day*, 1940, 133, 503
- See also Hypoglycemia*
- Body mass:** Epithelium and neoplasm cytochrome *c*, relation, *Rosenthal and Drabkin*, 1943, 150, 131
- Body weight:** Succinylsulfathiazole and, xanthopterin, effect, *Totter and Day*, 1943, 147, 257
- Bone:** Ash, vitamin D effect, *Correll and Wise*, 1938, 126, 573
- Fluoride adsorption, radioactive isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543
- Lead, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239
- Phosphatase, perosis, chick, *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 1939, 127, 411
- , sodium β -glycerophosphate hydrolysis, activation energy, *Bodansky*, 1939, 129, 197
- , sulphydryl compounds, *in vitro*, influence, *Williams and Watson*, 1940, 135, 337

Bone—continued:

Phosphate adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*, 1941, 138, 451

Phosphorus, inorganic, metabolism, radioactive phosphorus as indicator, *Manly and Bale*, 1939, 129, 125

Potassium, spectrochemistry, *Steadman, Hodge, and Horn*, 1941, 140, 71

Salt, solubility, *Logan and Kane*, 1939, 127, 705

Sodium adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 1943, 148, 321

—, insoluble, nature, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 1943, 148, 321

Solubility, biological fluids, *Logan and Kane*, 1939, 127, 705

See also Perosis, Skeleton

Bone marrow: Cytochrome oxidase and hematopoietic activity, copper relation, *Schultze*, 1941, 138, 219

Lipids, anemia effect, *Krause*, 1943, 149, 395

Pasteur effect, carbon monoxide-oxygen in study, *Warren and Carter*, 1943, 150, 267

Borate: Vitamin B₆, complex, formation, *Scudi, Bastedo, and Webb*, 1940, 136, 399

Boron: Riboflavin-, complex, water-soluble, *Frost*, 1942, 145, 693

Brain: Adenosine triphosphate, *Kerr*, 1941, 140, 77

— — and decomposition products, determination, *Kerr*, 1942, 145, 647

Alkalosis effect, *Yannet*, 1940, 136, 265

Blood arterial-venous differences, *Gibbs, Lennox, Nims, and Gibbs*, 1942, 144, 325

Nims, Gibbs, and Lennox, 1942, 145, 189

Brain—continued:

Blood arterial-venous differences, arterial carbon dioxide effect, *Nims, Gibbs, and Lennox*, 1942, 145, 189

Carbohydrate utilization, *Elliott, Scott, and Libet*, 1942, 146, 251

Cephalin amino acid, *Folch and Schneider*, 1941, 137, 51

—, nature, *Folch*, 1942, 146, 35

—, phosphatidyl serine, phosphatidyl ethanolamine, and inositol phosphatide fraction, separation, *Folch*, 1942, 146, 35

Cholesterol esterase, *Sperry and Brand*, 1941, 137, 377

Dihydrosphingosine isolation, *Carter and Norris*, 1942, 145, 709

Glycogen oxidation, effect, *Elliott and Libet*, 1940, 136, 797

Glycolysis, *Ochoa*, 1941, 141, 245

Lactic acid, *Stone*, 1940, 135, 43

Lipids, autolysis effect, *Sperry, Brand, and Copenhaver*, 1942, 144, 297

—, deposition and metabolism, growth and myelination effect, *Waelsch, Sperry, and Stoyanoff*, 1941, 140, 885

—, metabolism, *Sperry, Waelsch, and Stoyanoff*, 1940, 135, 281

—, —, myelination effect, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 297

—, synthesis and deposition, deuterium as indicator, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 291

Metabolism, *Elliott and Libet*, 1942, 143, 227

Elliott, Scott, and Libet, 1942, 146, 251

Oxidation by, 2,3,5-triiodobenzoate and monoiodobenzoate effect, *Bernheim and Bernheim*, 1941, 138, 501

Oxygen uptake, *Elliott and Libet*, 1942, 143, 227

Phosphatide inositol, *Folch and Woolley*, 1942, 142, 963

Phosphatides, serine isolation, *Chargaff and Ziff*, 1941, 140, 927

Phosphatidyl serine isolation, *Folch*, 1941, 139, 973

Brain—continued:

- Phosphatidylserine, serine component, identification, *Folch*, 1941, 139, 973
- Phospholipid, formation *in vitro*, radioactive phosphorus as indicator, *Fries, Schachner, and Chaikoff*, 1942, 144, 59
- , — — —, radioactive phosphorus in study, hexose and pentose effect, *Schachner, Fries, and Chaikoff*, 1942, 146, 95
- metabolism, radioactive phosphorus as indicator, *Changus, Chaikoff, and Ruben*, 1938, 126, 493
- Phosphorus compounds, *Kerr*, 1941, 140, 77
- , —, 1942, 145, 647
- —, acid-soluble, *Stone*, 1940, 135, 43
- metabolism, radioactive phosphorus in study, *Fries and Chaikoff*, 1941, 141, 479
- Phosphorylation, *Ochoa*, 1941, 141, 245
- Proteinase, *Kies and Schwimmer*, 1942, 145, 685
- Pyruvic acid, oxidation and phosphorylation, *Ochoa*, 1941, 138, 751
- Sugar oxidation, *Bernheim and Bernheim*, 1941, 140, 441
- See also Cerebrum
- Bran:** Rice, concentrates, pyridoxine, conjugated, *Scudi*, 1942, 145, 637
- Bromide(s):** Blood and urine, determination, *Friedman*, 1942, 144, 519
- cell, red, permeability, *Smith, Eisenman, and Winkler*, 1941, 141, 555
- Extracellular fluid determination, use, *Brodie, Brand, and Leshin*, 1939, 130, 555
- Tissues and body fluids, *Weir and Hastings*, 1939, 129, 547
- Bromoacetyl sugar(s):** Silver salts, organic acids, action, *Tipson*, 1939, 130, 55
- Bromobenzene:** Growth relation, *Stekol*, 1939, 127, 131
- p*-, selenium excretion, administration effect, *Mozon, Schaefer, Lardy, DuBois, and Olson*, 1940, 132, 785

- Bromobenzyl bromide:** *p*-, N-acetyl-S-*p*-bromobenzyl-L-cysteine synthesis from, *Stekol*, 1941, 138, 225
- Bromobenzyl-L-cysteine:** S-*p*-, N-acetyl-S-*p*-bromobenzyl-L-cysteine synthesis from, *Stekol*, 1941, 138, 225
- Bromobenzylglutathione:** S-*p*-, N-acetyl-S-*p*-bromobenzyl-L-cysteine synthesis from, *Stekol*, 1941, 138, 225
- Bromophenyl-D-cysteine:** *p*-, acetylation *in vivo*, du *Vigneaud, Wood, and Binkley*, 1941, 138, 369
- Bryophyllum calycinum:** Leaves, organic acids, *Pucher*, 1942, 145, 511
- Buckwheat:** Leaf, nitrogen metabolism, *Vickery, Pucher, Schoenheimer, and Rittenberg*, 1939, 129, 791
- Buffer(s):** Alkali, blood, cutaneous, determination, *Rubin*, 1938, 126, 679
- β -Amylase activity, effect, *Ballou and Luck*, 1941, 139, 233
- Pantothenic acid determination, *Lactobacillus casei* use, effect, *Stokes and Martin*, 1943, 147, 483
- Buffer salt(s):** Thiamine, effect, *Beadle, Greenwood, and Kraybill*, 1943, 149, 339
- Buffy layer:** Blood, ascorbic acid-like reducing substance, *Buller and Cushman*, 1941, 139, 219
- Burette:** Micrometer, *Scholander, Edwards, and Irving*, 1943, 148, 495
- Bushy stunt:** Virus, protein, homogeneity, *Lauffer*, 1942, 143, 99
- , sedimentation rate, *Lauffer and Stanley*, 1940, 135, 463
- , tomato, diffusion constant, *Neurath and Cooper*, 1940, 135, 455
- , —, purification, *Stanley*, 1940, 135, 437
- Butanol:** *n*-, and urine, pregnancy, sodium pregnanediol glucuronide distribution, *Woolf, Vieregger, and Allen*, 1942, 146, 323
- Butter:** Carotenes, *Strain*, 1939, 127, 191
- Butter fat:** Vitamin A, vitamin A intake effect, *Deuel, Halliday, Hallman, Johnston, and Miller*, 1941, 139, 479

Butyric acid(s): α -Amino- β -thiol- n -, synthesis, *Carter, Stevens, and Ney*,

1941, 139, 247

α, β -Deutero-, metabolism, fasting, *Morehouse*,

1939, 129, 769

β, γ -Deutero-, metabolism, fasting, *Morehouse*,

1939, 129, 769

D-Erythro- α -amino- β, γ -dihydroxy- n -, synthesis, *Niemann and Nichols*,

1942, 143, 191

β -Hydroxy-. See Hydroxybutyric acid

dl- α -Hydroxy- γ -benzylthio-, metabolism, *Stekol*,

1941, 140, 827

Liver glycogen, radioactive isotope in study, *Buchanan, Hastings, and Nesbett*,

1943, 150, 413

— oxidation, glycogen effect, *Bobbitt and Deuel*,

1942, 143, 1

Phenylamino-, acetylation *in vivo*, *p*-aminobenzoic acid and sulfanilamide relation, *Fishman and Cohn*,

1943, 148, 619

d-Phenylamino-, inversion, nitrogen and hydrogen isotopes in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*,

1939, 131, 273

L-Phenylamino-, acetylation, nitrogen and hydrogen isotopes in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*,

1939, 131, 273

D-Threo- α -amino- β, γ -dihydroxy- n -, synthesis, *Niemann and Nichols*,

1942, 143, 191

Butyric(s): α -, dimethyl ethers, synthesis, and hydrolysis by lipase, *Baer and Fischer*,

1942, 145, 61

C

Cabbage: Leucylpeptidase, *Berger and Johnson*,

1939, 130, 655

Calciferol: Thyroparathyroidectomy-nephrectomy, effect, *Tweedy, Templeton, Patras, McJunkin, and McNamara*,

1939, 128, 407

Calcification: Growth, protein intake relation, *Conner, Kao, and Sherman*,

1941, 139, 835

Calcium: Absorption, lactose and hydrolysis products, effect, *Roberts and Christman*,

1942, 145, 267

Alimentary tract, *Adolph and Liang*,

1941, 137, 517

Amalgam electrode, protein and calcium chloride interaction, determination, *Joseph*,

1938, 126, 389

Assimilation, orange juice effect, *Lanford*,

1939, 130, 87

Biological material, determination, micro-, spectrochemical, *Duffendack, Thomson, Lee, and Koppius*,

1938, 126, 1

Blood, age effect, *Anderson and Elvehjem*,

1940, 134, 217

— cell, red, *Streef*,

1939, 129, 661

—, distribution, *Snyder and Katzenbogen*,

1942, 143, 223

— lead, influence, *Sobel, Yuska, Peters, and Kramer*,

1940, 132, 239

— serum, determination, micro-, *Sobel and Sobel*,

1939, 129, 721

— —, protein and, relationship, alkalosis effect, *Yannet*,

1941, 137, 409

Body, food calcium, effect, *Lanford and Sherman*,

1938, 126, 381

—, nutrition effect, *Lanford, Campbell, and Sherman*,

1941, 137, 627

Bone lead, influence, *Sobel, Yuska, Peters, and Kramer*,

1940, 132, 239

-Cephalin equilibrium, *Drinker and Zinsser*,

1943, 148, 187

Determination, *Sendroy*,

1942, 144, 243

—, micro-, *Van Slyke and Kreysa*,

1942, 142, 765

—, picrolonic acid use, *Cohn and Koltzoff*,

1943, 147, 705

1943, 148, 711

Globulins and, equilibria, *Drinker, Green, and Hastings*,

1939, 131, 641

Hypervitaminosis D_2 and D_3 , ingestion effect, *Morgan, Shimotori, and Hendricks*,

1940, 134, 761

Ionized, milk, *Nordbø*,

1939, 128, 745

Iron utilization, effect, *Fuhr and Steenbock*,

1943, 147, 59, 65, 71

Muscle and liver, distribution, *Eichelberger and McLean*,

1942, 142, 467

Calcium—continued:

- Protein relationship, blood serum, calcium and phosphate salts, effect, ultracentrifuge studies, *Masket, Chanutin, and Ludewig*, 1942, 143, 763
- — —, ultracentrifuge studies, *Ludewig, Chanutin, and Masket*, 1942, 143, 753
- —, calcium caseinate solutions, ultracentrifuge studies, *Chanutin, Ludewig, and Masket*, 1942, 143, 737
- —, ultracentrifuge studies, *Chanutin, Ludewig, and Masket*, 1942, 143, 737
- Ludewig, Chanutin, and Masket*, 1942, 143, 753
- Masket, Chanutin, and Ludewig*, 1942, 143, 763
- Tissue succinoxidase, effect, *Axelrod, Swingle, and Elvehjem*, 1941, 140, 931
- Utilization, intestine hydrogen ion concentration relation, *Jones*, 1942, 142, 557
- Calcium bicarbonate:** Dissociation, *Greenwald*, 1941, 141, 789
- Calcium carbonate:** Dissociation, *Greenwald*, 1941, 141, 789
- Calcium caseinate:** Solutions, calcium-protein relationship, ultracentrifuge studies, *Chanutin, Ludewig, and Masket*, 1942, 143, 737
- Calcium chloride:** Activity determination, electrolytic, amino acid solutions, *Joseph*, 1939, 130, 203
- Proteins and, interaction determination, amalgam electrode, *Joseph*, 1938, 126, 389
- Solution, intestine, changes, *Robinson, Stewart, and Luckey*, 1941, 137, 283
- Calcium lactate:** Solution, intestine, changes, *Robinson, Stewart, and Luckey*, 1941, 137, 283
- Calcium nitrate:** Pineapple hexosamine, uncombined, effect, *Sideris, Young, and Krauss*, 1938, 126, 233
- Calcium phosphate:** Dissociation, *Greenwald, Redish, and Kibrick*, 1940, 135, 65

Calcium phosphate—continued:

- Solubility, *Greenwald*, 1942, 143, 703, 711
- , hydrogen ion concentration effect, *Greenwald*, 1942, 143, 703
- product, *Greenwald*, 1942, 143, 711
- , solid phase, amount, effect, *Greenwald*, 1942, 143, 703
- Calcium salt(s):** Blood serum calcium-protein relationship, effect, ultracentrifuge studies, *Masket, Chanutin, and Ludewig*, 1942, 143, 763
- Succinoxidase system, effect, mechanism, *Swingle, Axelrod, and Elvehjem*, 1942, 145, 581
- Canavanine:** Urease, jack bean, removal, *Archibald and Hamilton*, 1943, 150, 155
- Cancer:** Tissue, glutamic acid, optical forms, *Johnson*, 1940, 132, 781
- See also Adenocarcinoma, Carcinoma, Sarcoma, Tumor
- Caproic acid:** ϵ -Amino-, ionization, aqueous solution, *Smith and Smith*, 1942, 146, 187
- Carbamide:** Phenylthio-, tyrosinase, effect, *Bernheim and Bernheim*, 1942, 145, 213
- Yeast nitrogen metabolism, effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- Carbazole:** Hexoses, identification and determination, polysaccharides and glycoproteins, use, *Gurin and Hood*, 1939, 131, 211
- Carbinol(s):** Acetylmethyl-, pyruvic acid formation from, bacterial enzyme preparation use, *Silverman and Werkman*, 1941, 138, 35
- Aromatic, and corresponding bromides, rotatory dispersion, *Levene and Rothen*, 1939, 127, 237
- , halogenation, *Levene and Rothen*, 1939, 127, 237
- Carbobenzoxy derivative:** Tobacco mosaic virus, *Miller and Stanley*, 1942, 146, 331
- Carbohydrate(s):** Arsenate effect, phosphopyruvic acid dephosphorylation, relation, *Meyerhof and Junowicz-Kocholaty*, 1942, 145, 443

Carbohydrate(s)—continued:

- Brain, utilization, *Elliott, Scott, and Libel*, 1942, 146, 251
- Characterization, *Moore and Link*, 1940, 133, 293
- Lohmar, Dimler, Moore, and Link*, 1942, 143, 551
- Dimler and Link*, 1943, 150, 345
- Citric acid production, effect, *Meyer and Smith*, 1940, 134, 739
- Dietary, uric acid excretion, effect, *Adlersberg and Ellenberg*, 1939, 128, 379
- Esters, phosphorylated, bacteria, autotrophic, *LePage and Umbreit*, 1943, 147, 263
- Group, nicotinamide nucleotides, identification, *Schlenk*, 1942, 146, 619
- High diets, fat synthesis, fasting, *Longenecker*, 1939, 128, 645
- Kidney acetoacetate, synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- , nephritic, synthesis, *Lyman and Barron*, 1940, 132, 293
- Liver fat, synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- , normal and diabetic, synthesis, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
- Metabolism, carbon dioxide participation, *Solomon, Vennesland, Klemperer, Buchanan, and Hastings*, 1941, 140, 171
- , cortin and sodium chloride effect, adrenalectomy, *Kendall, Flock, Bollman, and Mann*, 1938, 126, 697
- , fasting effect, *Chambers, Chandler, and Barker*, 1939, 131, 95
- , liver phosphates, acid-soluble, and, radioactive phosphorus in study, *Kaplan and Greenberg*, 1943, 150, 479
- , malaria parasites, *Wendell*, 1943, 148, 21
- , sexual variation, *Deuel and Davis*, 1942, 146, 649
- , *Staphylococcus aureus*, *Friedemann*, 1939, 130, 61
- , streptococci, *Friedemann*, 1939, 130, 757

Carbohydrate(s)—continued:

- Metabolism, thiamine effect, *Harper*, 1942, 142, 239
- , tissues, isolated, iodoacetic acid effect, *Barker, Shorr, and Malam*, 1939, 129, 33
- without glycolysis, *Fazekas and Himwich*, 1941, 139, 971
- Muscle, metabolism *in vitro*, *Stadie and Zapp*, 1943, 148, 669
- Rice factor, *Almquist, Mecchi, Stokstad, and Manning*, 1940, 134, 465
- Stokstad, Almquist, Mecchi, Manning, and Rogers*, 1941, 137, 373
- Storage and mobilization, blood hydrogen ion concentration effect, *Guest and Rawson*, 1941, 139, 535
- Tuberculin, properties, *Steenken*, 1941, 141, 91
- Carbohydrate group: Egg proteins, *Levene*, 1941, 140, 279
- Carbon: Determination, manometric, *Van Slyke and Folch*, 1940, 136, 509
- Heavy, carbon dioxide assimilation, tracer, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 365
- , —, bacterial fixation, use as tracer, *Wood, Werkman, Hemingway, and Nier*, 1940, 135, 789
- Isotope, glycine metabolism study with, *Olsen, Hemingway, and Nier*, 1943, 148, 611
- Radioactive, lactic acid metabolism, use in, *Vennesland, Solomon, Buchanan, Cramer, and Hastings*, 1942, 142, 371
- Rhubarb leaves, excised, loss during culture, *Vickery and Pucher*, 1939, 128, 685
- Urea formation, relation, *Rittenberg and Walsch*, 1940, 136, 799
- Carbon dioxide: Assimilation, heavy carbon as tracer, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 365
- Bacterial fixation, heavy carbon as tracer, *Wood, Werkman, Hemingway, and Nier*, 1940, 135, 789

Carbon dioxide—continued:

- Blood, arterial, cerebral blood arterial-venous differences, effect, *Nims, Gibbs, and Lennox*, 1942, 145, 189
 —, determination, gasometric, micro, *Scholander and Roughton*, 1943, 148, 573
 —, —, micro-, *West, Christensen, and Rinehart*, 1940, 132, 681
 —, influence, *Cohn, Tannenbaum, Thalhimer, and Hastings*, 1939, 128, 109
 — preservation, effect, *Smith, Tuthill, Drew, and Scudder*, 1940, 133, 499
 Body fluids, determination, micro-, *West, Christensen, and Rinehart*, 1940, 132, 681
 Carbohydrate cycle, relation, *Solomon, Vennesland, Klemperer, Buchanan, and Hastings*, 1941, 140, 171
 Fixation, enzymatic, oxalacetate, *Krampitz, Wood, and Werkman*, 1943, 147, 243
 Heavy, assimilation, heterotrophic bacteria, *Slade, Wood, Nier, Hemingway, and Werkman*, 1942, 143, 133
 Hydration, catalytic, *Kiese and Hastings*, 1940, 132, 267
 α -Ketoglutaric acid synthesis, utilization, *Evans and Slotin*, 1940, 136, 301
 Krebs' cycle, fixation mechanism, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 483
 Liver extracts, cell-free, assimilation, *Evans, Slotin, and Vennesland*, 1942, 143, 565
 —, —, fixation, mechanism, *Evans, Vennesland, and Slotin*, 1943, 147, 771
 —, fixation, pyruvic acid dissimilation, *Wood, Werkman, Hemingway, and Nier*, 1942, 142, 31
 Muscle, equilibria, *in vitro*, *Wallace and Lowry*, 1942, 144, 651
 Radioactive, glycogen formation from pyruvate *in vitro*, effect, *Buchanan, Hastings, and Nesbitt*, 1942, 145, 715

Carbon dioxide—continued:

- Radioactive, glycogen formation, glucose and, relation, *Vennesland, Solomon, Buchanan, and Hastings*, 1942, 142, 379
 Succinic acid, bacterial synthesis, carbon position, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 377
 Tension, jejunal secretions, *McGee and Hastings*, 1942, 142, 893
 Tissue, determination, *Danielson and Hastings*, 1939, 130, 349
Trypanosoma lewisi, glucose metabolism, rôle, *Searle and Reiner*, 1941, 141, 563
 Urea, synthesis, liver, rôle, *Evans and Slotin*, 1940, 136, 805
 Utilization, liver, *Evans and Slotin*, 1941, 141, 439
 Carbonic acid: Dissociation constant, first, protein solutions and muscle, *Danielson, Chu, and Hastings*, 1939, 131, 243
 Carbonic anhydrase: *Scott and Mendive*, 1941, 139, 661
 Main and Locke, 1941, 140, 909
 1942, 143, 729
 Scott and Fisher, 1942, 144, 371
 Activity, *Kiese and Hastings*, 1940, 132, 281
 Main and Locke, 1941, 140, 909
 Chemistry, *Scott and Mendive*, 1941, 140, 445
 Crystalline, *Scott*, 1942, 142, 959
 Molecular kinetics and electrophoresis, *Petermann and Hakala*, 1942, 145, 701
 Pancreatic juice secretion and composition, relation, *Tucker and Ball*, 1941, 139, 71
 Sulfanilamide, effect, *Free, Davies, and Myers*, 1943, 147, 167
 Zinc relation, *Hove, Elvehjem, and Hart*, 1940, 136, 425
 Main and Locke, 1942, 143, 729
 Carbon monoxide: Blood, determination, *Roughton*, 1941, 137, 617
 —, —, gasometric, *Horvath and Roughton*, 1942, 144, 747

Carbon monoxide—continued:

Blood, determination, gasometric, micro, *Scholander and Roughton*, 1943, 148, 551

Cytochrome *c* derivatives, chemical constitution, *Drabkin*, 1942, 146, 605

Hemoglobin, analysis, *Ross and Turner*, 1941, 139, 603

— derivatives, chemical constitution, *Drabkin*, 1942, 146, 605

-Oxygen, bone marrow, Pasteur effect, study by, *Warren and Carter*, 1943, 150, 267

Carbon suboxide: Amino acids and, reaction, *Ross and Green*,

1941, 137, 105

Blood serum albumin treated with, ultracentrifugal behavior, *Oncley, Ross, and Tracy*, 1941, 141, 797

Proteins and, *Ross and Christensen*, 1941, 137, 89

Christensen and Ross, 1941, 137, 101

Ross and Green, 1941, 137, 105

Oncley, Ross, and Tracy, 1941, 141, 797

Tracy and Ross, 1942, 142, 871

Ross and Tracy, 1942, 145, 19

Tracy and Ross, 1942, 146, 63

— — —, reaction, nature, *Ross and Christensen*, 1941, 137, 89

Tracy and Ross, 1942, 142, 871

Carbon tetrachloride: Fatty acid utilization, administration effect, *Winter*,

1940, 135, 123

— — —, dietary fat and, relation, *Winter*, 1942, 142, 17

Tissue fatty acids, administration effect, *Winter*, 1939, 128, 283

Carbonyl compound: Liver, identity, *Lehninger*,

1943, 149, 43

Carbonyl group(s): Ketosteroids, determination, gravimetric, *Hughes*,

1941, 140, 21

Carboxyhemoglobin: Digestion product, molecular weight, *Ross*,

1939, 127, 179

Pancreatic digestion, *Ross*, 1939, 127, 169

Carboxylase(s): *Green, Herbert, and Subrahmanyam*,

1941, 138, 327

Co-. See Cocarboxylase

Isolation and properties, *Green, Herbert, and Subrahmanyam*, 1940, 135, 795

Pea roots, *Horowitz and Heegaard*, 1941, 137, 475

Pyruvic and α -ketoglutaric, tissue, *Green, Westerfeld, Vennesland, and Knox*, 1941, 140, 683

Tissue, animal, *Green, Westerfeld, Vennesland, and Knox*, 1942, 145, 69

Yeast, activity, *Cajori*, 1942, 143, 357

—, N,N-dimethylaminoazobenzene split-products, effect, *Kensler, Young, and Rhoads*, 1942, 143, 465

Carboxyl group(s): Amino acids, free, determination, gasometric, *Van Slyke, Dillon, MacFadyen, and Hamilton*,

1941, 141, 627

Carboxylic acid(s): Di-, tyrosine metabolites, excretion, administration effect, *Sealock*,

1942, 146, 503

Diamino-, biotin, adipic acid relation, *Hofmann, Melville, and du Vigneaud*,

1942, 144, 513

—, —, 3,4-diaminotetrahydrothiophene stability, comparison, *Kilmer, Armstrong, Brown, and du Vigneaud*,

1942, 145, 495

—, —, phenanthrenequinone condensation, *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*,

1942, 145, 503

2-Methyl-substituted, monolayers, *Stållberg-Stenhagen and Stenhagen*,

1943, 148, 685

10-Methyl-substituted, monolayers, *Stållberg-Stenhagen and Stenhagen*,

1943, 148, 685

Pyrrolidone-, formation, glutathione hydrolysis, enzymatic, kidney extract, hydrogen ion concentration effect, *Woodward and Reinhart*,

1942, 145, 471

- Carboxymethylcysteine:** S-, metabolism, *Blood and Lewis*, 1941, 139, 407
 —, —, cystinuria, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- Carboxypeptidase:** Kinetics, substrate effect, *Bergmann and Fruton*, 1942, 145, 247
 Specificity, *Hofmann and Bergmann*, 1940, 134, 225
- Carcinogenic substance(s):** Phospholipid oxidation, effect, *Deutsch, Kline, and Rusch*, 1941, 141, 529
- Carcinoma:** Adrenocortical, Δ^5 -androst-tenetriol-3(β),16,17 isolation, *Hirschmann*, 1943, 150, 363
 —, steroid excretion, *Hirschmann*, 1943, 150, 363
 Mammary, phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
- Cardiac:** See Heart
- Carnivora:** Kynurenic acid excretion, *Jackson*, 1939, 131, 469
- Carnosine:** l-, homologues, synthesis, *Hunt and du Vigneaud*, 1939, 127, 43
 —, structure, depressor activity, relation, *Hunt and du Vigneaud*, 1939, 127, 727
 Muscle, determination, *Zapp and Wilson*, 1938, 126, 9, 19
 —, species distribution, *Zapp and Wilson*, 1938, 126, 19
- Carotene(s):** α -, isolation and detection, *Strain*, 1939, 127, 191
 β -, isomerization, carotene determination, relation, *Beadle and Zscheile*, 1942, 144, 21
 —, silk oak flowers, *Zechmeister and Polgár*, 1941, 140, 1
 Butter and carrot roots, *Strain*, 1939, 127, 191
 Destruction, chlorophyll effect, *Pepkowitz*, 1943, 149, 465
 Determination, β -carotene isomerization, relation, *Beadle and Zscheile*, 1942, 144, 21
 —, colorimetric, *Koehn and Sherman*, 1940, 132, 527
- Carotene(s)—continued:**
 Fat and, oxidation, carotene oxidase effect, *Sumner and Sumner*, 1940, 134, 531
 Oxidation, unsaturated fats, peroxidation, enzymic, relation, *Sumner*, 1942, 146, 215
 Pro- γ -, *Evonymus fortunei*, isolation, *Zechmeister and Escue*, 1942, 144, 321
 —, *Pyracantha angustifolia* fruit, *Zechmeister and Schroeder*, 1942, 144, 315
 Stability, sodium cyanide effect, *Pepkowitz*, 1943, 149, 465
 —, tocopherol effect, *Quackenbush, Cox, and Steenbock*, 1942, 145, 169
 —, vegetable extracts, acetone and petroleum ether, *Pepkowitz*, 1943, 149, 465
- Carotenoid(s):** *Beadle and Zscheile*, 1942, 144, 21
 Flour, wheat, Hungarian, *Zechmeister and Cholnoky*, 1940, 135, 31
 Watermelon, *Zechmeister and Polgár*, 1941, 139, 193
- Carotenoid pigment(s):** Sea mussel, metabolism, *Scheer*, 1940, 136, 275
- Carp:** Blood constituents, *Field, Elvehjem, and Juday*, 1943, 148, 261
- Carrot:** Root, carotenes, *Strain*, 1939, 127, 191
- Cartilage:** Growth factor, nutrition, chick, *Hegsted, Oleson, Elvehjem, and Hart*, 1939, 130, 423
 — factors, chick, *Hegsted, Hier, Elvehjem, and Hart*, 1941, 139, 863
- Casein:** Blood serum regeneration, effect, *Mueller, Kemmerer, Cox, and Barnes*, 1940, 134, 573
- Cystine liberation, tryptic digestion, *Jones and Gersdorff*, 1939, 129, 207
- Deaminized, anemia from, amino acid effect,** *Guerrant and Hogan*, 1939, 128, 363
 —, —, lysine relation, *Hogan, Powell, and Guerrant*, 1941, 137, 41

Casein—continued:

Dietary, liver lipid, effect, *Treadwell, Groothuis, and Eckstein*,

1942, 142, 653

Digest, blood serum protein regeneration, effect, *Mueller, Kemmerer, Cox, and Barnes*,

1940, 134, 573

—, growth effect, *Mueller, Kemmerer, Cox, and Barnes*,

1940, 134, 573

Fatty livers, effect, *Tucker, Treadwell, and Eckstein*,

1940, 135, 85

Gelatin and egg albumin interaction at surfaces, *Moyer and Moyer*,

1940, 132, 357

Growth effect, *Mueller, Kemmerer, Cox, and Barnes*,

1940, 134, 573

Hydrolysate, preparation, choline and homocystine relation, study with, *Welch*,

1941, 137, 173

Iodinated, thyroid activity, effect, *Reineke, Williamson, and Turner*,

1942, 143, 285

—, thyroxine, crystalline, recovery, *Reineke and Turner*,

1943, 149, 555

—, l-thyroxine recovery, *Reineke and Turner*,

1943, 149, 563

Liver phosphorus, acid-soluble, distribution, fasting, effect, *Rapoport, Leva, and Guest*,

1943, 149, 65

Low diet, glutathione, bromobenzene and naphthalene, growth relation, *Stekol*,

1939, 127, 131

Methionine-free protein, conversion, *Toennies*,

1942, 145, 667

Nutrition effect, hydrogen peroxide and formic acid effect, *Bennett and Toennies*,

1942, 145, 671

Tryptophane-free protein, conversion, *Toennies*,

1942, 145, 667

Castor bean: *See Bean*

Catalase: *Sumner and Dounce*,

1939, 127, 439

Sumner, Dounce, and Frampton,

1940, 136, 343

Activity, multilayers, *Harkins, Fourn, and Fourn*,

1940, 132, 111

Anti-, *Tria*,

1939, 129, 377

Blood serum, crystalline blood serum albumin, and hemin, effect, *Sevag, Shelburne, and Ibsen*,

1942, 144, 711

Catalase—continued:

Crystalline, liver, *Dounce*,

1942, 143, 497

Hydroxylamine and p-hydroxylaminobenzenesulfonamide effect, *Sevag, Shelburne, and Ibsen*,

1942, 144, 711

Immunochemistry, *Campbell and Fourn*,

1939, 129, 385

Harkins, Fourn, and Fourn,

1940, 132, 111

Liver, activity, tumor-bearing rats, tumor extirpation effect, *Greenstein, Jenrette, and White*,

1941, 141, 327

Preparation and properties, *Dounce*,

1942, 143, 497

Tissue, copper and iron deficiency, effect, *Schultze and Kuiken*,

1941, 137, 727

—, pyridoxine effect, *Lepkovsky and Parsons*,

1943, 149, 281

Cataphoresis: Apparatus, *Coolidge*,

1939, 127, 551

Catechol: Derivatives, amine oxidase inactivation, effect, *Friedenwald and Herrmann*,

1942, 146, 411

Catecholase: *See Tyrosinase*

Cathepsin: Autolysis effect, *Eder, Bradley, and Belfer*,

1939, 128, 551

Spleen and kidney, *Fruton, Irving, and Bergmann*,

1941, 141, 763

—, nature, *Fruton, Irving, and Bergmann*,

1941, 138, 249

Tissue, normal and malignant, separation, *Maver*,

1939, 131, 127

Cation(s): Tissue, soft, determination, *Buell*,

1939, 130, 357

Cell: Substances, dyes, reactions, *Kelly*,

1939, 127, 55, 73

See also Nucleus

Cellophane: Membranes, preparation, *Seymour*,

1940, 134, 701

Central nervous system: Lipid deposition, growth effect, *Fries, Entenman, Changus, and Chaikoff*,

1941, 137, 303

Phospholipid metabolism, age influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*,

1940, 132, 23

Cephalic region: Chick embryo, dipeptidase, *Palmer and Levy*,

1940, 136, 629

Cephalin(s): Blood, determination, micro-, *Erickson, Avrin, Teague, and Williams*,

1940, 135, 671

— plasma, *Artom*,

1941, 139, 65

— serum, determination, *Thannhauser, Benotti, and Reinstein*,

1939, 129, 709

Body fluids, determination, *Thannhauser, Benotti, and Reinstein*,

1939, 129, 709

Brain, amino acid, *Folch and Schneider*,

1941, 137, 51

—, phosphatidyl serine, phosphatidyl ethanolamine, and inositol phosphatide fraction, separation, *Folch*,

1942, 146, 35

Calcium-, equilibrium, *Drinker and Zinsser*,

1943, 148, 187

Chemical constitution, *Gray*,

1940, 136, 167

Formation rate, body, unstable isotopes as indicator, *Chargaff*,

1939, 128, 587

Hemoglobins and, reaction, *Chargaff, Ziff, and Hogg*,

1939, 131, 35

Liver, turnover, *Sinclair*,

1940, 134, 83

Nitrogenous constituents, *Bliz*,

1941, 139, 471

Tissue, *Thannhauser, Benotti, Walcott, and Reinstein*,

1939, 129, 717

—, determination, *Thannhauser, Benotti, and Reinstein*,

1939, 129, 709

—, —, micro-, *Erickson, Avrin, Teague, and Williams*,

1940, 135, 671

Ceramide(s): Synthesis, *Reichel and Thannhauser*,

1940, 135, 15

Cerebrin: *Aspergillus sydowi* mycelium, isolation, *Bohonos and Peterson*,

1943, 149, 295

Cerebroside(s): Determination, *Brand and Sperry*,

1941, 141, 545

Dihydrosphingosine- and hydrolecithin-containing, *Cysticercus*

larvae, *Lesuk and Anderson*,

1941, 139, 457

Cerebroside(s)—continued:

Glucose-containing, spleen, isolation,

Halliday, Deuel, Tragerman, and

Ward,

1940, 132, 171

Nerve tissue, determination, micro-,

Edman,

1942, 143, 219

Cerebrospinal cord: Dihydrosphingosine isolation, *Carter and Norris*,

1942, 145, 709

Cerebrospinal fluid: Nicotinamide and related substances, determination,

bacterial, *Isbell, Wooley, Butler, and*

Sebrell,

1941, 139, 499

Phenylalanine, phenylpyruvic oligophrenia, *Jervis, Block, Bolling, and*

Kanze,

1940, 134, 105

Protein determination, colorimetric, *Looney and Walsh*,

1939, 127, 117

Cerebrum: Phosphorus compounds, acid-soluble, *Stone*,

1943, 149, 29

See also Brain

Ceric sulfate: Lactic acid determination, use in, *Winnick*,

1942, 142, 451

Cevanthridine: Chemical constitution, *Craig and Jacobs*,

1941, 139, 293

Cevine: Dehydrogenation, hydrocarbons, nature, *Craig, Jacobs, and Lavin*,

1941, 139, 277

—, selenium, *Craig and Jacobs*,

1939, 129, 79

1941, 139, 263

Oxidation, *Craig and Jacobs*,

1941, 141, 253

Chemical constitution: Elimination maximum, influence, *Gray and*

Cawley,

1940, 134, 397

Chemical reaction(s): Rapid, apparatus for study, *DuBois*,

1941, 137, 123

Chick: Alcohol precipitate factor, nature, *Schumacher, Heuser, and Norris*,

1940, 135, 313

Anemia, vitamin deficiency, relation, *Hogan and Parrott*,

1940, 132, 507

Antianemia vitamin, *O'Dell and Hogan*,

1943, 149, 323

Antidermatitis factor, structure, *Woolley, Waisman, and Elvehjem*,

1939, 129, 673

Arginine, nutrition rôle, *Hegsted, Briggs, Elvehjem, and Hart*,

1941, 140, 191

- Cholic acid:** *Alcaligenes faecalis* effect, Schmidt, Hughes, Green, and Cooper, 1942, 145, 229
- Cholesterol conversion,** biological, relation, Bloch, Berg, and Rittenberg, 1943, 149, 511
- Desoxy-, keto derivatives,** bile, determination, Hughes, 1942, 143, 11
- Fat injection effect,** Virtue and Doster-Virtue, 1940, 133, 573
- Keto derivatives,** bile, determination, Hughes, 1942, 143, 11
- Metabolism,** Schmidt and Hughes, 1942, 143, 771
- Oxidation,** Gallagher and Long, 1943, 147, 131
- Choline:** Acetyl-, adenosinetriphosphatase, system, activation, DuBois and Potter, 1943, 148, 451
- , formation, glutamic acid effect, Nachmansohn, John, and Waelsch, 1943, 150, 485
- , —, mechanism, Baer, 1942, 146, 391
- Analogues,** perosis, effect, Jukes and Welch, 1942, 146, 19
- Arsenic analogue,** lecithin component, arsenocholine chloride-fed rats, Welch and Landau, 1942, 144, 581
- Biological relationships,** Stetten, 1941, 138, 437
1941, 140, 143
- Blood,** determination, micro-, Erickson, Avrin, Teague, and Williams, 1940, 135, 671
- lipids, pancreatic duct ligation, effect, Entenman, Montgomery, and Chaikoff, 1940, 135, 329
- Body,** choline-free diets, effect, Jacobi, Baumann, and Meek, 1941, 138, 571
- Chemical constitution and transmethylation relation,** Moyer and du Vigneaud, 1942, 143, 373
- Containing phospholipids, blood plasma, Artom, 1941, 139, 65
- Deficiency,** liver fat, effect, Handler, 1943, 149, 291
- Deficient diet, biochemical defect, Jacobi and Baumann, 1942, 142, 65
- Choline—continued:**
- Determination, chemical and biological, Engel, 1942, 144, 701
- , colorimetric, Marenzi and Cardini, 1943, 147, 363
- , *Neurospora* mutant use, Horowitz and Beadle, 1943, 150, 325
- Dietary,** liver lipids, effect, Stetten and Grail, 1942, 144, 175
- Esterase.** See Cholinesterase
- Free,** bile, hepatic and gallbladder, Johnston, Irvin, and Walton, 1939, 131, 425
- Free diets, body choline, effect, Jacobi, Baumann, and Meek, 1941, 138, 571
- Hemorrhagic degeneration,** relation, Griffith and Wade, 1940, 132, 627
- Homocystine and,** relation, Welch, 1941, 137, 173
- replacement of methionine, effect, du Vigneaud, Chandler, Moyer, and Keppel, 1939, 131, 57
Chandler and du Vigneaud, 1940, 135, 223
- Kidney hemorrhage,** effect, Patterson and McHenry, 1942, 145, 207
- Lipotropic effect,** Gavin, Patterson, and McHenry, 1943, 148, 275
- Liver action,** radioactive phosphorus as indicator, Perlman and Chaikoff, 1939, 127, 211
- fat, effect, Handler and Bernheim, 1943, 148, 649
- lipids, pancreatic duct ligation, effect, Entenman, Montgomery, and Chaikoff, 1940, 135, 329
- Livers,** fatty, depancreatized dogs with insulin, relation, Entenman and Chaikoff, 1941, 138, 477
- Low diet, hemorrhagic degeneration effect, Griffith and Wade, 1939, 131, 567
- Metabolism,** Griffith and Wade, 1939, 131, 567
1940, 132, 627
Griffith, 1940, 132, 639
- Methionine methyl group transfer to,** du Vigneaud, Chandler, Cohn, and Brown, 1940, 134, 787

Choline—continued:

- Methyl groups, methionine synthesis, biological, use, *Simmonds, Cohn, Chandler, and du Vigneaud*, 1943, 149, 519
- Nutrition essential, chicks, *Hegsted, Mills, Elvehjem, and Hart*, 1941, 138, 459
- Oxidase, liver, fatty acid action, *Bernheim*, 1940, 133, 291
- , livers, fatty, *Handler and Bernheim*, 1942, 144, 401
- Perosis, prevention, *Jukes*, 1940, 134, 789
- Pneumococcus growth factor, *Rane and Subbarow*, 1940, 134, 455
- Related compounds, biological relationships, *Stetten*, 1941, 138, 437
- Synthesis, biological, methionine methyl group, rôle, *du Vigneaud, Cohn, Chandler, Schenck, and Simmonds*, 1941, 140, 625
- , tissue, dietary lipotropic methyl effect, *Stetten*, 1942, 142, 629
- Tissues, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
- Cholinesterase(s)**: Adrenal, *Antopol and Glick*, 1940, 132, 669
- Blood, *Alles and Hawes*, 1940, 133, 375
- Morphine effect, *in vitro*, *Eadie*, 1941, 138, 597
- Physostigmine and prostigmine effect, *Eadie*, 1942, 146, 85
- Specificity, *Glick*, 1939, 130, 527
1941, 137, 357
- Cholylcystic acid**: Synthesis, *Velick, White, and Lewis*, 1939, 127, 477
- Chondroitin**: Gizzard erosion, chick, effect, *Bird, Oleson, Elvehjem, and Hart*, 1938, 126, 671
- Chondrosamine hydrochloride**: Methylation, *Levene*, 1940, 133, 767
- Chondrosin**: *Levene*, 1941, 140, 267
- Chorioid plexus**: Fetus, secretion onset, *Fleznar and Stiehler*, 1938, 126, 619
- Secretion, mechanism, *Stiehler and Fleznar*, 1938, 126, 603

- Chorion**: Gonadotropic hormone, oxidation-reduction, *Bowman*, 1941, 137, 293
- Chroman**: 7-Hydroxy-3-(4'-hydroxyphenyl), equal, identity, *Anderson and Marrian*, 1939, 127, 649
- Chromatophorotropic hormone**: Crustacean eyestalk, *Abramowitz*, 1940, 132, 501
- Chromium**: Succinic dehydrogenase-cytochrome system, effect, *Horecker, Stoltz, and Hogness*, 1939, 128, 251
- Chromogen**: Creatinine-like, excretion, kidney, *Smith, Finkelstein, and Smith*, 1940, 135, 231
- Phyllo-, protoporphyrin and pyridine, *Ross*, 1939, 127, 163
- Chymopapain**: Papaya latex, *Jansen and Balls*, 1941, 137, 459
- Chymotrypsin**: Malonyl egg albumin and blood serum albumin, digestion, *Ross and Tracy*, 1942, 145, 19
- Specificity, *Fruton and Bergmann*, 1942, 145, 253
- Cinnamic acid**: Benzoyl- α -amino-, azlactones, preparation, *Carter and Risser*, 1941, 139, 255
- Citric acid**: Antiketogenic activity, *MacKay, Carne, and Wick*, 1940, 133, 59
- Ascorbic acid and, metabolism, *Purinton and Schuck*, 1943, 148, 237
- Endogenous, diet influence, *Smith and Meyer*, 1939, 131, 45
- Excretion, thiamine effect, *Smith and Meyer*, 1941, 139, 227
- Formation site, animal organism, *Orten and Smith*, 1939, 128, 101
- Free, absorption and fate, *Kuether and Smith*, 1941, 137, 647
- Glycogenic activity, *MacKay, Carne, and Wick*, 1940, 133, 59
- Iso-, malic acid, crassulacean, identity, *Pucher and Vickery*, 1942, 145, 525
- Metabolism, thiamine relation, *Sober, Lipton, and Elvehjem*, 1940, 134, 605
- Muscle respiration, cycle, *Stare, Lipton, and Goldinger*, 1941, 141, 981

Citric acid—continued:

Production, carbohydrate effect,
Meyer and Smith, 1940, 134, 739

Citrulline: Arginine, conversion, kidney,
Borsook and Dubnoff, 1941, 141, 717
— replacement, diet, effect, *Klose*
and Almquist, 1940, 135, 153
Ornithine cycle, relation, *Gornall and*
Hunter, 1943, 147, 593

Climate: Blood, effect, *Dill, Wilson,*
Hall, and Robinson, 1940, 136, 449

Clostridia: Growth factor, *Woolley,*
McDaniel, and Peterson,
1939, 131, 381

Clostridium aciduri: Purine decom-
position, *Barker and Beck*,
1941, 141, 3

Clostridium butylicum: Lactic acid-
racemizing enzyme, *Christensen,*
Johnson, and Peterson,
1939, 127, 421

Preparations, pyruvic acid dissimila-
tion, *Koepsell and Johnson*,
1942, 145, 379

Clostridium cylindrosporum: Purine de-
composition, *Barker and Beck*,
1941, 141, 3

Clostridium tetani: Growth require-
ments, *Mueller and Miller*,
1941, 140, 933

Clover: Sweet, hemorrhagic agent, iden-
tification and synthesis, *Stahmann,*
Huebner, and Link, 1941, 138, 513
—, —, isolation and crystallization,
Campbell and Link, 1941, 138, 21
—, —, synthesis, *Huebner and*
Link, 1941, 138, 529
—, — concentrate determination,
blood plasma prothrombin use in,
Campbell, Smith, Roberts, and Link,
1941, 138, 1
—, — concentrates, preparation,
Campbell, Roberts, Smith, and Link,
1940, 136, 47
—, — disease, *Campbell, Roberts,*
Smith, and Link, 1940, 136, 47
Campbell, Smith, Roberts, and Link,
1941, 138, 1
Campbell and Link, 1941, 138, 21

Clover—continued:

Sweet, hemorrhagic disease, *Stahmann,*
Huebner, and Link,
1941, 138, 513

Huebner and Link, 1941, 138, 529

Overman, Stahmann, Sullivan, Hueb-
ner, Campbell, and Link,
1942, 142, 941

Overman, Stahmann, and Link,
1942, 145, 155

Baumann, Field, Overman, and Link,
1942, 146, 7

Link, Overman, Sullivan, Huebner,
and Scheel, 1943, 147, 463

Coagulation: Blood, chemistry, *Cohen*
and Chargaff, 1940, 136, 243
Chargaff, Ziff, and Cohen,
1940, 136, 257

Ziff and Chargaff, 1940, 136, 689

—, heparin action, *Ziff and Chargaff*,
1940, 136, 689

—, lung thromboplastic protein, action,
Cohen and Chargaff, 1940, 136, 243

—, vitamin K deficiency, polyhydroxy-
anthraquinones, effect, *Martin and*
Lischer, 1941, 137, 169

Fibrinogen, *Chargaff and Ziff*,
1941, 138, 787

Chargaff and Bendich, 1943, 149, 93;
See also Anticoagulant

Cobalt: Bile, distribution and excretion,
radioactive isotopes in study, *Green-*
berg, Copp, and Cuthbertson,
1943, 147, 749

Mesoporphyrin, nitrogenous bases,
coordination, *Taylor*, 1940, 135, 569

Cocaine: Liver lipids, feeding influence,
MacLachlan and Hodge,
1939, 127, 721

Coccarboxylase: Absorption spectra,
Melnick, 1939, 131, 615

Action, mechanism, *Stern and Melnick*,
1939, 131, 597

1940, 135, 365

Blood, determination, *Goodhart*,
1940, 135, 77

—, vitamin B₁ deficiency determina-
tion, *Goodhart and Sinclair*,
1940, 132, 11

Coccarboxylase—continued:

- Reduction products, absorption spectra, *Melnick*, 1939, 131, 615
- Thiamine effect, *Lipton and Elvehjem*, 1940, 136, 637
- Vitamin B₁ conversion, *Melnick and Field*, 1939, 127, 531
- Coccidioides immitis:** Polysaccharide, immunologically active, *Hassid, Baker, and McCready*, 1943, 149, 303
- Coconut oil:** Fatty acids, *Longenecker*, 1939, 130, 167
- Cod liver oil:** Esters, absorption spectra, vacuum distillation effect, *Norris, Rusoff, Miller, and Burr*, 1941, 139, 199
- Vitamin D, new, *Bills, Massengale, Hickman, and Gray*, 1938, 126, 241
- Coenzyme(s):** Glyoxalase, *Behrens*, 1941, 141, 503
- I, blood cell, red, and muscle, nicotinic acid deficiency effect, *Azelrod, Spies, and Elvehjem*, 1941, 138, 667
- , oxidation-reduction potential, *Borsook*, 1940, 133, 629
- , tissue, *Dann and Kohn*, 1940, 136, 435
- , —, determination, *Azelrod and Elvehjem*, 1939, 131, 77
- , —, hyperthyroidism, *Katzenelbogen, Azelrod, and Elvehjem*, 1941, 141, 611
- , —, nicotinic acid effect, *Azelrod, Madden, and Elvehjem*, 1939, 131, 85
- , yeast, preparation, *Williamson and Green*, 1940, 135, 345
- II, tissue, *Dann and Kohn*, 1940, 136, 435
- Tissue, *Handler and Dann*, 1941, 140, 739
- Collagen:** Acid-base-binding capacity, *Theis and Jacoby*, 1942, 146, 163
- Amino acids, determination, *Bergmann and Stein*, 1939, 128, 217
- Heart, *Alburn and Myers*, 1939, 131, 713
- Heat-denatured, acid- and base-binding capacity, *Theis and Jacoby*, 1943, 148, 105

Collagen—continued:

- Salt-denatured, acid-, base-, and salt-binding capacity, *Theis and Jacoby*, 1943, 148, 603
- Tissues, various species, *Lowry, Gilligan, and Katersky*, 1941, 139, 795
- Collodion:** Particles, blood serum proteins, electric mobilities, film formation, relation, *Moyer and Gorin*, 1940, 133, 605
- Colloid(s):** Hydrophilic, viruses, plant, and protein macro molecules, isolation and crystallization by, *Cohen*, 1942, 144, 353
- Purification, electrodialysis, *Joseph*, 1938, 126, 403
- Colon:** Bacteria and aerogenes, *d-fucose* fermentation, *Field and Poe*, 1940, 132, 473
- , sugars, rare, fermentation, *Field and Poe*, 1940, 132, 473
- Colorimeter:** Photoelectric, test-tube, *Summerson*, 1939, 130, 149
- Colorimetry:** Colorimeter, photoelectric, use, *Summerson*, 1939, 130, 149
- Photometer, photoelectric, use, *Rosenfeld*, 1939, 129, 179
- Colpidium campylum:** Growth factors, *Peterson*, 1942, 146, 537
- Complement:** Anti-, yeast, *Pillemer and Ecker*, 1941, 137, 139
- Blood serum, separation, *Ecker, Pillemer, Jones, and Seifter*, 1940, 135, 347
- Convection effect(s):** Electrophoresis, *Alvarez-Tostado*, 1940, 135, 799
- Copper:** Blood serum, arthropods, *Allison and Cole*, 1940, 135, 259
- Bone marrow cytochrome oxidase, and hematopoietic activity, relation, *Schulze*, 1941, 138, 219
- Catalysis inhibitors, respiration and photosynthesis, *Chlorella pyrenoidosa*, effect, *Green, McCarthy, and King*, 1939, 128, 447
- Cytochrome oxidase, tissue, effect, *Schulze*, 1939, 129, 729
- Dehydrogenase action, *Bernheim*, 1940, 133, 485

Copper—continued:

-Protein oxidases, properties, *McCarthy, Green, and King*,

1939, 128, 455

Radioactive, anemia, nutritional, use in study, *Schultze and Simmons*,

1942, 142, 97

Tissue catalase, effect, *Schultze and Kuiken*

1941, 137, 727

Vitamin C, rat, effect, *Svirbely*,

1939, 131, 233

Coproporphyrin: I, pyridine, spectrophotometry, *Clark and Perkins*,

1940, 135, 643

Iron, nitrogenous bases, coordination, *Vestling*,

1940, 135, 623

Protoporphyrin conversion, liver, *Watson, Pass, and Schwartz*,

1941, 139, 583

Salzburg and Watson, 1941, 139, 593

Corn: Glycogen, injection effect, *Morris*,

1943, 148, 699

See also Maize

Corn oil: Fatty acids, *Longenecker*,

1939, 129, 13

Corpus luteum: Lipids, cyclic variations, *Weinhouse and Brewer*,

1942, 143, 617

Cortin: Carbohydrate and mineral metabolism, adrenalectomy, effect, *Kendall, Flock, Bollman, and Mann*,

1938, 126, 697

-Like material, urine, life-maintaining and gluconeogenic properties, *Venning, Hoffman, and Browne*,

1943, 148, 455

Corynebacterium diphtheriae: See *Diphtheria bacillus*

Cosubstrate(s): Proteolysis, *Behrens and Bergmann*,

1939, 129, 587

Cottonseed: Hulls, hemicelluloses, *Anderson, Hechtman, and Seeley*,

1938, 126, 175

Cottonwood: Hemicelluloses and pectic materials, *Anderson, Kaster, and Seeley*,

1942, 144, 767

Coumarin: 3,3'-Methylenebis(4-hydroxy-), blood plasma prothrombin, effect, *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*,

1942, 142, 941

Coumarin—continued:

3,3'-Methylenebis(4-hydroxy-), prothrombin time, 2-methyl-1,4-naphthoquinone and *l*-ascorbic acid effect, *Overman, Stahmann, and Link*,

1942, 145, 155

—, vitamin C excretion and hypoprothrombinemia, effect, *Baumann, Field, Overman, and Link*,

1942, 146, 7

Cozymase: Oxidation, milk flavoprotein action, *Ball and Ramsdell*,

1939, 131, 767

Synthesis, blood cell, red, mechanism, nicotinic acid and nicotinamide effect, *Handler and Kohn*,

1943, 150, 447

— from nicotinic acid, blood cell, red, effect, *Kohn and Klein*,

1939, 130, 1

Cream: Fat droplets, surface film composition, *Moyer*,

1940, 133, 29

Creatine: Amidine group, origin, biological, *Bloch and Schoenheimer*,

1940, 134, 785

Blood, determination, colorimetric, *Peters*,

1942, 146, 179

Body, formation and disappearance rate, *Bloch, Schoenheimer, and Rittenberg*,

1941, 138, 155

Creatinine and, metabolism relation, isotopic nitrogen in study, *Bloch and Schoenheimer*,

1939, 131, 111

-Creatinine excretion, creatine ingestion and age relation, *Hyde*,

1942, 143, 301

Excretion, glycine and histidine ingestion effect, *Hyde*,

1940, 134, 95

—, intestinal, and decomposition, nephrectomy effect, *Bodansky, Duff, and McKinney*,

1941, 140, 365

Formation, animals, ammonia utilization, *Foster, Schoenheimer, and Rittenberg*,

1939, 127, 319

—, biological, *Bloch and Schoenheimer*,

1940, 133, 633

—, chick, *Almquist, Mecchi, and Kratzer*,

1941, 141, 365

Almquist, Kratzer, and Mecchi,

1943, 148, 17

Creatine—continued:

- Heart, *Alburn and Myers*,
1939, 131, 713
- Mangun and Myers*, 1940, 135, 411
- Kidney, formation, *Borsook and Dubnoff*,
1940, 134, 635
- Liver, formation, *Borsook and Dubnoff*,
1940, 134, 635
- , — from glycocyamine, nephrec-
tomy effect, *Bodansky, Duff, and McKinney*,
1941, 140, 365
- , —, glycocyamine relation, *Borsook and Dubnoff*,
1940, 132, 559
- Metabolism, *Miller, Allinson, and Baker*,
1939, 130, 383
- Baker and Miller*, 1939, 130, 393
- 1940, 132, 233
- Methionine methyl group transfer to,
du Vigneaud, Chandler, Cohn, and Brown,
1940, 134, 787
- Muscle, *Myers and Mangun*,
1940, 132, 701
- Corsaro, Mangun, and Myers*,
1940, 135, 407
- Mangun and Myers*, 1940, 135, 411
- , vitamin E deficiency, α -tocopherol
effect, *Houchin and Mattill*,
1942, 146, 301
- Phospho-. See Phosphocreatine
- Precursors, biological, *Bloch and Schoenheimer*,
1941, 138, 167
- Synthesis, biological, methionine
methyl group, rôle, *du Vigneaud, Cohn, Chandler, Schenck, and Simmonds*,
1941, 140, 625
- , l(-)-methionine specificity,
Handler and Bernheim,
1943, 150, 335
- , urea and glycine relation, *Fisher and Wilhelmi*,
1940, 132, 135
- Tissue, *Baker and Miller*,
1939, 130, 393
- , determination, enzymatic, *Miller, Allinson, and Baker*, 1939, 130, 383
- , formation, rat, *Baker and Miller*,
1940, 132, 233
- Transmethylation, *in vivo*, *du Vigneaud, Chandler, and Moyer*,
1941, 139, 917
- Urine, determination, colorimetric,
Peters, 1942, 146, 179

- Creatinine:** Blood, determination, col-
orimetric, *Peters*, 1942, 146, 179
- Creatine and, metabolism relation,
isotopic nitrogen in study, *Bloch and Schoenheimer*, 1939, 131, 111
- Creatine-, excretion, creatine ingestion
and age relation, *Hyde*,
1942, 143, 301
- Excretion, glycine and histidine inges-
tion effect, *Hyde*, 1940, 134, 95
- , intestinal, and decomposition,
nephrectomy effect, *Bodansky, Duff, and McKinney*,
1941, 140, 365
- Like chromogen, excretion, kidney,
Smith, Finkelstein, and Smith,
1940, 135, 231
- Metabolism, *Miller, Allinson, and Baker*,
1939, 130, 383
- Baker and Miller*, 1939, 130, 393
- 1940, 132, 233
- Tissue, *Baker and Miller*,
1939, 130, 393
- , determination, enzymatic, *Miller, Allinson, and Baker*, 1939, 130, 383
- Transmethylation, *in vivo*, *du Vigneaud, Chandler, and Moyer*,
1941, 139, 917
- Urine, determination, colorimetric,
Peters, 1942, 146, 179
- Creatinuria:** Pituitary, anterior, extract,
and iodine effect, *Gaebler and Bartlett*,
1939, 129, 559
- Testosterone propionate effect, *Coffman and Koch*,
1940, 135, 519
- Cresol:** *p*-, oxidation, peroxidase in,
Westerfeld and Lowe, 1942, 145, 463
- Crotonic acid:** Benzoyl- α -amino-, azlac-
tone, preparation, *Carter, Handler, and Melville*,
1939, 129, 359
- , — II, preparation, *Carter and Stevens*,
1940, 133, 117
- Crown-gall:** Polysaccharide, *McIntire, Peterson, and Riker*, 1942, 143, 491
- See also *Phytomonas tumefaciens*
- Crustacea:** Eyestalk, chromatophoro-
tropic hormone, *Abramowitz*,
1940, 132, 501
- Crystalloid(s):** Purification, electrodia-
lysis, *Joseph*, 1938, 126, 403

- Cucumber:** Virus, amino acids, aromatic, *Knight and Stanley*, 1941, 141, 39
 —, preparation and properties, *Knight and Stanley*, 1941, 141, 29
- Cucurbit:** Seed, globulins, amino acids and nutrition value, *Vickery, Smith, Hubbell, and Nolan*, 1941, 140, 613
- Cucurbita pepo:** Seedlings, etiolated, asparagine and glutamine formation, *Vickery and Pucher*, 1943, 150, 197
- Cullen, Glenn Ernest:** Obituary, *Van Slyke*, 1940, 134, preceding p. 467
- Cupric chloride:** Crystallization, protein effect, *Morris and Morris*, 1941, 141, 515
- Cyanide:** Cytochrome *c* derivatives, chemical constitution, *Drabkin*, 1942, 146, 605
 — — reduction, effect, *Potter*, 1941, 137, 13
- Ferriprotoporphyrin** nitrogenous derivatives, reaction, *Drabkin*, 1942, 142, 855
- Gonadotropic extracts,** effect, *Bischoff*, 1940, 134, 641
- Hemoglobin derivatives,** chemical constitution, *Drabkin*, 1942, 146, 605
- Cystamine:** Taurocholic acid production, effect, *Virtue and Doster-Virtue*, 1938, 126, 141
- Cysteic acid:** Cholyl-, synthesis, *Velick, White, and Lewis*, 1939, 127, 477
- Taurocholic acid production,** effect, *Virtue and Doster-Virtue*, 1939, 127, 431
- Cysteine:** N-Acetyl-S-*p*-bromobenzyl-*L*-, synthesis from *p*-bromobenzyl bromide, S-*p*-bromobenzyl-*L*-cysteine, and S-*p*-bromobenzylglutathione, *Stekol*, 1941, 138, 225
- S-(β -Amino- β -carboxyethyl)-homo-, synthesis, *Brown and du Vigneaud*, 1941, 137, 611
- Benzyl-*L*-, racemization, *Wood and du Vigneaud*, 1939, 130, 109
- S-Benzylhomo-, detoxication, animal body, *Stekol*, 1939, 128, 199
- S-*p*-Bromobenzyl-*L*-, N-acetyl-S-*p*-bromobenzyl-*L*-cysteine synthesis from, *Stekol*, 1941, 138, 225
- Cysteine—continued:**
p-Bromophenyl-*d*-, acetylation *in vivo*, *du Vigneaud, Wood, and Binkley*, 1941, 138, 369
- S-Carboxymethyl-, metabolism, *Blood and Lewis*, 1941, 139, 407
- , —, cystinuria, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- d*-, benzyl derivatives, optical inversion *in vivo*, *du Vigneaud, Wood, and Irish*, 1939, 129, 171
- Decomposition, *Routh*, 1939, 130, 297
- Derivatives, urine cystine, cystinuria, effect, *Hess and Sullivan*, 1943, 149, 543
- Desulfurase, nature, *Binkley*, 1943, 150, 261
- Determination, *Sullivan, Hess, and Howard*, 1942, 145, 621
- , colorimetric, micro-, *Vassel*, 1941, 140, 323
- Dietary, cystinuria, effect, *Hess and Sullivan*, 1942, 143, 545
- Gonadotropic extracts, effect, *Bischoff*, 1940, 134, 641
- hormones, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1939, 130, 243
- Homo-. See Homocysteine
- Liver, formation, *U*-S-(β -amino- β -carboxyethyl)homocysteine, relation, *Binkley, Anslow, and du Vigneaud*, 1942, 143, 559
- , —, homocysteine and serine relation, *Binkley and du Vigneaud*, 1942, 144, 507
- phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 133, 651
- Metabolism, cystinuria, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- Oxidative reactions, *Toennies and Callan*, 1939, 129, 481
- Sugars and, combination, *Schubert*, 1939, 130, 601
- Sulfur, sulfide sulfur, radioactive, conversion, enzymatic, *Smythe and Halliday*, 1942, 144, 237

Cysteine—continued:

- Taurocholic acid production, effect,
Virtue and Doster-Virtue,
1939, 128, 665
- Uricase activation effect, *Scheer and Scheer*,
1943, 150, 359
- Urine cystine, cystinuria, effect, *Hess and Sullivan*,
1943, 149, 543
- Utilization, liver, hydrogen sulfide production, relation, *Smythe*,
1942, 142, 387
- Cysteine sulfinic acid:** Taurocholic acid production, effect, *Virtue and Doster-Virtue*,
1939, 127, 431
- Cysticercus fasciolaris:** Chemistry, *Salisbury and Anderson*,
1939, 129, 505
- Lesuk and Anderson*, 1941, 139, 457
- Larvae, cerebroside containing dihydrosphingosine and hydrolecithin, *Lesuk and Anderson*, 1941, 139, 457
- Cystine:** Blood globins, species differences, *Beach, Bernstein, Hummel, Williams, and Macy*,
1939, 130, 115
- plasma ultrafiltrates, l-cystine and dl-methionine administration effect, *Brown and Lewis*,
1941, 138, 717
- Casein digestion, trypsin, liberation, *Jones and Gersdorff*,
1939, 129, 207
- d-, preparation, *Wood and du Vigneaud*,
1939, 130, 109
- Decomposition, *Routh*, 1938, 126, 147
- , alkaline, *Lindstrom and Sandstrom*,
1941, 138, 445
- Deficient diet, growth, mesolanthionine effect, *Jones, Divine, and Horn*,
1942, 146, 571
- Derivatives, urine cystine, cystinuria, effect, *Hess and Sullivan*,
1943, 149, 543
- Determination, *Sullivan, Hess, and Howard*,
1942, 145, 621
- , colorimetric, micro-, *Vassel*,
1941, 140, 323
- , cuprous oxide use, *Zittle and O'Dell*,
1941, 139, 753
- Dicholyl-, synthesis, *Velick, White, and Lewis*,
1939, 127, 477
- Dietary, dl-S-(β -amino- β -carboxyethyl)-homocysteine replacement by, effect, *du Vigneaud, Brown, and Chandler*,
1942, 143, 59

Cystine—continued:

- Dietary, chick, effect, *Briggs, Mills, Elvehjem, and Hart*,
1942, 144, 47
- , cystinuria, effect, *Hess and Sullivan*,
1942, 143, 545
- , liver lipids, effect, *Treadwell, Groothuis, and Eckstein*,
1942, 142, 653
- Stetten and Grail*, 1942, 144, 175
- Diglycyl-l-, synthesis, *Greenstein*,
1939, 128, 241
- N,N'-Dimethyl-, optical isomers, utilization, *Kies, Dyer, Wood, and du Vigneaud*,
1939, 128, 207
- Excretion, cystinuria, amino acid effect, *Hess and Sullivan*,
1942, 142, 3
- , —, arachin effect, *Hess and Sullivan*,
1942, 146, 381
- Fatty livers, effect, *Tucker, Treadwell, and Eckstein*,
1940, 135, 85
- Growth effect, *Womack and Rose*,
1941, 141, 375
- Hemorrhagic degeneration, effect, *Griffith and Wade*,
1940, 132, 627
- Griffith*, 1940, 132, 639
- Homo-. See Homocysteine
- Insulin, acid sensitivity, *Sullivan and Hess*,
1939, 130, 745
- , determination, colorimetric and polarographic, *Sullivan, Hess, and Smith*,
1939, 130, 741
- l-, blood plasma ultrafiltrate cystine and sulfur distribution, administration effect, *Brown and Lewis*,
1941, 138, 717
- , optical rotation, *Toennies*,
1942, 143, 75
- Liver fat, effect, *Tucker and Eckstein*,
1938, 126, 117
- phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*,
1940, 133, 651
- Metabolism, cystinuria, *Lough, Perilestein, Heinen, and Carier*,
1941, 139, 487
- Methionine conversion, radioactive sulfur as indicator, *Tarver and Schmidt*,
1939, 130, 67

Cystine—continued:

- Oxidative reactions, *Toennies and Callan*, 1939, 129, 481
- Peanut proteins, *Brown*, 1942, 142, 299
- Peptides, physical chemistry, *Greenstein, Klemperer, and Wyman*, 1939, 129, 681
- Pituitary pressor and oxytocic hormones, *Potts and Gallagher*, 1942, 143, 561
- Protein hydrolysates, determination, micro-, polarographic, *Stern, Beach, and Macy*, 1939, 130, 733
- Proteins, deaminized, *Hess and Sullivan*, 1939, 128, 93
- Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
- Stability, alkali effect, *Jones and Gersdorff*, 1939, 129, 207
- Synthesis, *Wood and du Vigneaud*, 1939, 131, 267
- *in vivo*, *Rose and Wood*, 1941, 141, 381
- , rat, *Beach and White*, 1939, 127, 87
- Urine cystine, cystinuria, effect, *Hess and Sullivan*, 1943, 149, 543
- , determination, *Brand, Cahill, and Kassell*, 1940, 133, 431
- , —, polarographic, *Reed*, 1942, 142, 61
- Utilization, liver, hydrogen sulfide production, relation, *Smythe*, 1942, 142, 387
- Vitamin B₄ deficiency, chick, effect, *Briggs, Luckey, Elvehjem, and Hart*, 1943, 150, 11
- Cystine betaine:** Metabolism, *Jen and Lewis*, 1939, 127, 97
- Cystine disulfide:** Taurocholic acid production, effect, *Virtue and Doster-Virtue*, 1939, 127, 431
- Cystinuria:** S-Carboxymethylcysteine metabolism, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- Cystine and cysteine and derivatives, urine cystine, effect, *Hess and Sullivan*, 1943, 149, 543

Cystinuria—continued:

- Cystine and cysteine, dietary, effect, *Hess and Sullivan*, 1942, 143, 545
- — — metabolism, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- excretion, amino acids, effect, *Hess and Sullivan*, 1942, 142, 3
- —, arachin effect, *Hess and Sullivan*, 1942, 146, 381
- Dog, *Brand, Cahill, and Kassell*, 1940, 133, 431
- *Hess and Sullivan*, 1942, 143, 545
- 1942, 146, 381
- 1943, 149, 543
- Homocystine and homocysteine, urine cystine, effect, *Hess and Sullivan*, 1943, 149, 543
- metabolism, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- Irish terriers, *Brand, Cahill, and Kassell*, 1940, 133, 431
- Methionine, dietary, effect, *Hess and Sullivan*, 1942, 143, 545
- metabolism, *Lough, Perilstein, Heinen, and Carter*, 1941, 139, 487
- Cytochrome:** c, cyanide and carbon monoxide derivatives, chemical constitution, *Drabkin*, 1942, 146, 605
- , determination, *Potter and DuBois*, 1942, 142, 417
- , —, spectrophotometric, micro, *Rosenthal and Drabkin*, 1943, 149, 437
- , —, spectroscopic, *Junowicz-Kocholaty and Hogness*, 1939, 129, 569
- 1939, 131, 187
- , enzyme reduction, *Haas, Horecker, and Hogness*, 1939, 130, 425
- , epithelium, normal and neoplastic, body mass, relation, *Rosenthal and Drabkin*, 1943, 150, 131
- , iron determination, micro, *Drabkin*, 1941, 140, 387
- , oxidase, soluble, *Altschul, Abrams, and Hogness*, 1939, 130, 427
- peroxidase, *Altschul, Abrams, and Hogness*, 1940, 136, 777
- *Abrams, Altschul, and Hogness*, 1942, 142, 303

Cytochrome—continued:

- c, pyridine derivatives, chemical constitution, *Drabkin*, 1942, 146, 605
- , reactions, hydrogen transport relation, *Lockhart and Potter*, 1941, 137, 1
- reductase, *Haas, Horecker, and Hogness*, 1940, 136, 747
- , reduction, cyanide effect, *Potter*, 1941, 137, 13
- , —, enzyme, *Haas, Horecker, and Hogness*, 1940, 136, 747
- , spectrophotometric constants, *Drabkin*, 1941, 140, 373
- , tissue, determination and distribution, *Stotz*, 1939, 131, 555
- , — distribution, *Junowicz-Kocholaty and Hogness*, 1939, 129, 569
- , —, 1939, 131, 187
- , yeast respiration, effect, *Carroll and Stier*, 1941, 137, 787
- Oxidase, *Haas*, 1943, 148, 481
- , bone marrow, copper relation, *Schultze*, 1941, 138, 219
- , chick embryo, *Albaum and Worley*, 1942, 144, 697
- , spectrum, *Melnick*, 1942, 146, 385
- , spermatozoa, *Zittle and Zitin*, 1942, 144, 99
- , tissue, copper and iron deficiencies, effect, *Schultze*, 1939, 129, 729
- , —, determination, *Schneider and Potter*, 1943, 149, 217
- , —, — and distribution, *Stotz*, 1939, 131, 555
- Oxidase-cytochrome system, oxidation-reduction potentials, fetus metanephros, *Flechner*, 1939, 131, 703
- Reductase, isolation, inhibition and inactivation, and reaction with oxygen, *Haas, Harrer, and Hogness*, 1942, 143, 341
- Succinic dehydrogenase-, system, effect, *Horecker, Stotz, and Hogness*, 1939, 128, 251

D

- Decevinic acid:** *Craig and Jacobs*, 1940, 134, 123

- Deer:** Virginia white-tailed, tissue lipids, composition, *Treadwell and Eckstein*, 1939, 128, 373
- Dehydrase:** Serine, nature, *Binkley*, 1943, 150, 261
- Dehydration:** Blood plasma volume and thiocyanate, effect, *Mellors, Muntwyler, Mautz, and Abbott*, 1942, 144, 785
- Body water and electrolytes, distribution, nephrectomy effect, *Chanutin and Ludwig*, 1939, 131, 519
- Dehydroascorbic acid:** Complexes, sulfhydryl compounds, *Drake, Smythe, and King*, 1942, 143, 89
- Decarboxylation, ninhydrin effect, *West and Rinehart*, 1942, 146, 105
- Determination, micro-, *Bessey*, 1938, 126, 771
- 2,4-Dinitrophenylhydrazine derivative, ascorbic acid determination, use, blood and urine, *Roe and Kuether*, 1943, 147, 399
- Transformation, irreversible, *Rosenfeld*, 1943, 150, 281
- Dehydrogenase(s):** Aero-, glucose, antibacterial, *Penicillium notatum*, *Birkinshaw and Raistrick*, 1943, 148, 459
- Copper action, *Bernheim*, 1940, 133, 485
- α -Ketoglutaric, heart, *Ochoa*, 1943, 149, 577
- Papain action, *Bernheim*, 1940, 133, 141
- Phenylhydrazine action, *Bernheim*, 1940, 133, 485
- Succinic, -cytochrome system, effect, *Horecker, Stotz, and Hogness*, 1939, 128, 251
- , marine organisms, *Ball and Meyerhof*, 1940, 134, 483
- , phenothiazone, inhibition, *Collier and Allen*, 1941, 140, 675
- , tissue, determination, *Schneider and Potter*, 1943, 149, 217
- Trypsin action, *Bernheim*, 1940, 133, 141
- Dehydroisandrosterone:** Androsterone and, chromogenic effect, *Saier, Grauer, and Starkey*, 1943, 148, 213

Dehydroisoandrosterone—continued:

- Calibration curves, *Saier, Warga, and Grauer*, 1941, 137, 317
- Determination, polarographic, *Hershberg, Wolfe, and Fieser*, 1941, 140, 215
- , spectrochemical, *Langstroth, Talbot, and Fineman*, 1939, 130, 585
- m-Dinitrobenzene reaction, behavior, *Langstroth and Talbot*, 1939, 129, 759
- Delphinine:** *Jacobs and Craig*, 1939, 127, 361
1939, 128, 431
1940, 136, 303
- Derivatives, hydrochloric, nitric, and nitrous acids, effect, *Jacobs and Craig*, 1940, 136, 303
- Hydrochloric, nitric, and nitrous acids, effect, *Jacobs and Craig*, 1940, 136, 303
- Oxo-, *Jacobs and Craig*, 1939, 128, 431
- Delphinium staphisagria:** *Staphisine, Jacobs and Craig*, 1941, 141, 67
- Dental plaque:** Acid production of glucose, relation, *Muntz*, 1943, 148, 225
- Dentin:** Fluoride adsorption, radioactive isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543
- Phosphate adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*, 1941, 138, 451
- Sodium adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Garrett, Fowler, Thomas, Bonner, and Dessauer*, 1943, 148, 321
- Depressor activity:** l-Carnosine structure, relation, *Hunt and du Vigneaud*, 1939, 127, 727
- Dermatitis:** Anti-, factor, chick, structure, *Woolley, Waisman, and Elvehjem*, 1939, 129, 673
- See also Acrodynia
- Desoxycholic acid:** Keto derivatives, bile, determination, *Hughes*, 1942, 143, 11

- Desoxycorticosterone acetate:** Blood cells, red, and muscle cations, effect, *Hegnauer*, 1943, 150, 353
- Pregnanediol excretion, effect, *Hoffman, Kazmin, and Browne*, 1943, 147, 259
- Desoxyribonucleic acid(s):** Chemical constitution, *Levene*, 1938, 126, 63
- Enzyme dephosphorylation, *Schmidt, Pickels, and Levene*, 1939, 127, 251
- Desoxyribose:** Electrophoretic mobilities, *Cohen*, 1942, 146, 471
- Desthiobiotin:** Biotin chemical constitution, relation, *du Vigneaud, Melville, Folkers, Wolf, Mozingo, Keresztesy, and Harris*, 1942, 146, 475
- Desulfurase:** *Laskowski and Fromageot*, 1941, 140, 663
- Cysteine, nature, *Binkley*, 1943, 150, 261
- Detergent(s):** Alkylbenzenesulfonate, egg albumin, electrophoresis, *Lundgren, Elam, and O'Connell*, 1943, 149, 183
- Synthetic, proteins and, complex formation, *Putnam and Neurath*, 1943, 150, 263
- Deuteriocholesterol:** Preparation, *Bloch and Rittenberg*, 1943, 149, 505
- Deuterium:** Brain lipids, synthesis and deposition, indicator, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 291
- Fatty acids, unsaturated, body, behavior, indicator, *Bernhard and Schoenheimer*, 1940, 133, 707
- d-Lysine metabolism, study with, *Ratner, Weissman, and Schoenheimer*, 1943, 147, 549
- l(+)-Lysine stability, study with, *Weissman and Schoenheimer*, 1941, 140, 779
- Tissue lipids, synthesis and deposition, indicator, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 291
- Deuterobutyric acid:** α , β -, metabolism, fasting, *Morehouse*, 1939, 129, 769
- β , γ -, metabolism, fasting, *Morehouse*, 1939, 129, 769
- Dextran:** Chemical constitution, synthesis from sucrose, *Betacoccus arabinosaceus*, *Hassid and Barker*, 1940, 134, 163

- Diabetes:** Blood diastase, *Somogyi*, 1940, 134, 315
 — pyruvate and lactate, glucose and insulin effect, *Klein*, 1942, 145, 35
 Carbohydrate synthesis from liver fat and kidney acetoacetate, *Stadie, Zapp, and Lukens*, 1941, 137, 63
 Glucose tolerance, sodium chloride effect, *Orten and Devlin*, 1940, 136, 461
 Glycogen storage, effect, *Pauls and Drury*, 1942, 145, 481
 Ketone body and liver fatty acid relation, *Stadie, Zapp, and Lukens*, 1941, 137, 75
 — metabolism, insulin effect, *Stadie, Zapp, and Lukens*, 1940, 132, 423
 Lipemia, blood plasma and blood cell, red, lipids, *Rubin*, 1939, 131, 691
 Liver acetic acid, non-formation, *Stadie, Zapp, and Lukens*, 1941, 137, 75
 — respiration, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
 — urea formation and carbohydrate synthesis, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
 Metabolism, intermediary, *Stadie, Zapp, and Lukens*, 1941, 137, 63, 75
 Phlorhizin, phosphorus metabolism, radioactive phosphorus as indicator, *Weissberger*, 1941, 139, 543
 Diacetyl: Determination, colorimetric, *Stotz and Raborg*, 1943, 150, 25
 Diacetyl β -benzylglucoside: 2,3-, and derivatives, *Raymond, Tipson, and Levene*, 1939, 130, 47
 Diamine(s): Deamination, oxidative, histaminase action, *Stephenson*, 1943, 149, 169
 Diamino acid(s): Phospho-12-tungstates, solubility and composition, *Van Slyke, Hiller, and Dillon*, 1942, 146, 137
 Diaminocarboxylic acid: Biotin, adipic acid relation, *Hofmann, Melville, and du Vigneaud*, 1942, 144, 513
 —, 3,4-diaminotetrahydrothiophene stability, comparison, *Kilmer, Armstrong, Brown, and du Vigneaud*, 1942, 145, 495
- Diaminocarboxylic acid—continued:**
 Biotin, phenanthrenequinone condensation, *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 1942, 145, 503
 Diaminotetrahydrothiophene: 3,4-, synthesis and stability, *Kilmer, Armstrong, Brown, and du Vigneaud*, 1942, 145, 495
 Diastase: Blood, health and diabetes, *Somogyi*, 1940, 134, 315
 Malt, plant nutrients, inorganic, effect, *Braun*, 1942, 145, 197
 Saccharogenic action, *Somogyi*, 1940, 134, 301
 Taka-, buffer influence, *Ballou and Luck*, 1940, 135, 111
 Diastatic reaction(s): Equilibria, *Stark*, 1942, 142, 569
 Diatom(s): Chlorofucine, *Strain and Manning*, 1942, 144, 625
Strain, Manning, and Hardin, 1943, 148, 655
 Lipids, *Clarke and Mazur*, 1941, 141, 283
 Pigments, *Pace*, 1941, 140, 483
 Dibenzanthracene: Tissue vitamin A, effect, *Baumann, Foster, and Moore*, 1942, 142, 597
 Dicarboxylic acid: Tyrosine metabolites, excretion, administration effect, *Sealock*, 1942, 146, 503
 Dichlorobenzenesulfonic acid: 3,4-, histidine preparation, use, *Vickery*, 1942, 143, 77
 Dichlorofluorescein: Biological fluids, chlorides, determination, micro-, *Saifer and Hughes*, 1939, 129, 273
 Dichlorophenol indophenol: 2,6-, ascorbic acid determination, use, *Highet and West*, 1942, 146, 655
 Dicholylcystine: Synthesis, *Velick, White, and Lewis*, 1939, 127, 477
 Diet: Blood uric acid, effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
 Body fat, keeping quality, effect, *Barnes, Lundberg, Hanson, and Burr*, 1943, 149, 313
 Citric acid, endogenous, influence, *Smith and Meyer*, 1939, 131, 45

Diet—continued:

- Egg vitamin A, effect, *Almquist, Mackinney, and Mecchi*, 1943, 150, 99
- Essential element, mouse, *Woolley*, 1940, 136, 113
- elements, guinea pig, *Woolley*, 1942, 143, 679
- Fat rancidity, effect, *Overman*, 1942, 142, 441
- Glucose absorption, effect, *Sinclair and Fassina*, 1941, 141, 509
- Ketosis, fasting, liver fat and, relation, *MacKay, Carne, Wick, and Visscher*, 1941, 141, 889
- Liver uricase, effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
- Mixed, liver phosphorus, acid-soluble, distribution, fasting, effect, *Rapoport, Leva, and Guest*, 1943, 149, 65
- Pantothenic acid, tissues, chick, effect, *Snell, Pennington, and Williams*, 1940, 133, 559
- Skeleton phosphorus turnover, pregnancy, effect, *Manly and Levy*, 1941, 139, 35
- Tissue phospholipids, relation, *Ariom and Fishman*, 1943, 148, 405, 415, 423
- See also Feed, Food, Foodstuff, Nutrition
- Diethylstilbestrol: Blood plasma phospholipids, effect, *Flock and Bollman*, 1942, 144, 571
- Diffusion: Biochemical reactions, manometric, *Roughton*, 1941, 141, 129
- Digestive secretion(s): Thiamine, fate, *Melnick, Robinson, and Field*, 1941, 138, 49
- Digitonide(s): Splitting, *Bergmann*, 1940, 132, 471
- Digitoxose: *d*-, identification as benzimidazole derivative, *Dimler and Link*, 1943, 150, 345
- Diglycyl-L-cystine: Synthesis, *Greenstein*, 1939, 128, 241
- Dihydroatisine: *Jacobs and Craig*, 1943, 147, 567

- Dihydrolysergic acid: Dimethylindole from, *Jacobs and Craig*, 1939, 128, 715
- Dihydrosphingosine: Brain and spinal cord, isolation, *Carter and Norris*, 1942, 145, 709
- Containing cerebroside, *Cysticercus* larvae, *Lesuk and Anderson*, 1941, 139, 457
- Dihydrotheelin: α -, placenta, isolation, *Huffman, Thayer, and Doisy*, 1940, 133, 567
- , urine, pregnancy, isolation, *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 1940, 134, 591
- Urine, pregnancy, isolation, *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 1939, 130, 431
- Dihydroxyacetone: Blood, determination, *Turner, Kress, and Harrison*, 1943, 148, 581
- N-(α , γ -Dihydroxy- β , β -dimethylbutyl)-taurine: Growth inhibition, pantothenic acid effect, *Snell*, 1941, 141, 121
- Diiodotyrosine: Blood plasma, turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*, 1941, 140, 603
- Determination, photometric, *Brand and Kassell*, 1939, 131, 489
- Formation, thyroidectomy effect, radioactive iodine as indicator, *Morton, Chaikoff, Reinhardt, and Anderson*, 1943, 147, 757
- Iodine, inorganic, conversion *in vitro*, thyroid, sulfanilamide effect, *Franklin and Chaikoff*, 1943, 148, 719
- Thyroid, formation *in vitro*, *Morton and Chaikoff*, 1942, 144, 565
- , — —, radioactive iodine as indicator, *Morton and Chaikoff*, 1943, 147, 1
- , — rate, radioactive iodine as indicator, *Perlman, Morton, and Chaikoff*, 1941, 139, 449
- , turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*, 1941, 140, 603

Dilodotyrosine—continued:Thyroxine, conversion, *Block*,

1940, 135, 51

Dimethylaminoazobenzene: N,N-, split-products, yeast carboxylase, effect, *Kensler, Young, and Rhoads*,

1942, 143, 465

Dimethylcystine: N, N', optical isomers, utilization, *Kies, Dyer, Wood, and du Vigneaud*,

1939, 128, 207

Dimethylergoline(s): 6,8-, d-lysergic and dl-lysergic acid transformation, *Gould, Craig, and Jacobs*,

1942, 145, 487

—, synthetic, lysergic acid base, comparison, *Jacobs and Gould*,

1939, 130, 399

Dimethylglycine: N,N-, hippuric acid synthesis, availability, *Abbott and Lewis*,

1939, 131, 479

Dimethylindole: Dihydrolysergic acid derivative, *Jacobs and Craig*,

1939, 128, 715

Dimethyllysine: α -N-, growth availability, *Gordon*,

1939, 127, 487

Dimethyl- β -methylglucoside: 2,4-, synthesis, *Adams, Reeves, and Goebel*,

1941, 140, 653

Dimethyl sulfone: Adrenal gland, *Pfiffner and North*,

1940, 134, 781

Dinitrobenzene: m-, dehydroisoandrosterone and androsterone, reaction, *Langstroth and Talbot*,

1939, 129, 759

Dinitrophenol: Spermatozoal metabolism, effect, *Lardy and Phillips*,

1943, 149, 177

Dinoflagellate(s): Chlorofucine, *Strain, Manning, and Hardin*,

1943, 148, 655

Dinucleotide: Flavin adenine, amino acids and, equilibrium relation, *Stadie and Zapp*,

1943, 150, 165

Diodrast: Blood and urine, determination, colorimetric, *Flox, Pitesky, and Alving*,

1942, 142, 147

Dipeptidase(s): Activation, *Berger and Johnson*,

1940, 133, 639

Chick embryo, *Levy and Palmer*,

1940, 136, 415

Dipeptidase(s)—continued:Chick embryo, cephalic region, *Palmer and Levy*,

1940, 136, 629

— — extracts, *Palmer and Levy*,

1940, 136, 407

Intestine mucosa, *Gailey and Johnson*,

1941, 141, 921

Dipeptide(s): Racemization, acetylation with ketene, *Cahill and Burton*,

1940, 132, 161

Diphenylamine: Biological media, levulose determination, use, *Corcoran and Page*,

1939, 127, 601

Blood levulose determination, use, *Corcoran and Page*,

1939, 127, 601

Inulin determination, use, *Corcoran and Page*,

1939, 127, 601

Diphosphoglycerate: Blood, acidified, decomposition, glycolysis relation, *Rapoport and Guest*,

1939, 129, 781

— cells, rickets, *Rapoport and Guest*,

1938, 126, 749

Diphosphoglyceric acid: Blood cell electrolyte equilibrium, pyloric obstruction effect, *Rapoport and Guest*,

1939, 131, 675

Diphosphopyridine: Nucleotide, betaine aldehyde oxidation, effect, *Klein and Handler*,

1942, 144, 537

—, determination, manometric, *Jandorf, Klemperer, and Hastings*,

1941, 138, 311

—, *Fusarium* fermentation, alcoholic, *in vivo*, *Gould, Tytell, and Jaffe*,

1942, 146, 219

—, isolation, *Jandorf*,

1941, 138, 305

—, reduced, oxidation, milk flavo-protein action, *Ball and Ramsdell*,

1939, 131, 767

—, stability, tissue, *Jandorf*,

1943, 150, 89

—, synthesis, *Chilomonas paramecium*, *Hutchens, Jandorf, and Hastings*,

1941, 138, 321

Diphosphothiamine: Reduction rate, *Barron and Lyman*,

1941, 141, 951

Diphtheria: Antitoxin, papain effect, *Petermann*,

1942, 144, 607

Intoxication, vitamin C, suprarenals, relation, *Torrance*,

1940, 132, 575

- Diphtheria bacillus:** Glutamic and aspartic acids, configuration, *Chargaff*, 1939, 130, 29
- Diving:** Seal muscle metabolism, *Scholander, Irving, and Grinnell*, 1942, 142, 431
- Dog:** Cystinuria, *Brand, Cahill, and Kassell*, 1940, 133, 431
Hess and Sullivan, 1942, 143, 545
 1942, 146, 381
 1943, 149, 543
- Dolphin:** Blood water and electrolytes, *Eichelberger, Fetcher, Geiling, and Vos*, 1940, 133, 145
 Milk, *Eichelberger, Fetcher, Geiling, and Vos*, 1940, 134, 171
 Muscle, water and electrolytes, *Eichelberger, Geiling, and Vos*, 1940, 133, 661
- Dopa:** Oxidase, mammalian, tyrosinase relation, *Hogeboom and Adams*, 1942, 145, 273
- Drop analysis:** Quantitative, *Sisco, Cunningham, and Kirk*, 1941, 139, 1
Cunningham, Kirk, and Brooks, 1941, 139, 11, 21
Tompkins and Kirk, 1942, 142, 477
Sandkuhle, Kirk, and Cunningham, 1942, 146, 427
- Drosophila:** v^+ hormone, identification, *Tatum and Haagen-Smit*, 1941, 140, 575
- Drying:** Biological materials, apparatus, *Kaye, Leibner, and Connor*, 1940, 132, 195
- Dulcitol:** Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231
- 1,2,3,5,6-O-Pentamethyl, synthesis, *Tipson and Levene*, 1939, 129, 575
- Duodenum:** Lipids, fat absorption, relation, *Reiser*, 1942, 143, 109
- Duponol:** Insulin, solution, ultracentrifuge and diffusion studies, *Miller and Andersson*, 1942, 144, 475
- Dye(s):** Basic, tissue nuclei combination, *Kelley*, 1939, 127, 73
 Cell substances, reactions, *Kelley*, 1939, 127, 55, 73
 Tissue nuclei and nucleoproteins, reaction, comparison, *Kelley*, 1939, 127, 55

E

- Earth(s):** Rare, succinic dehydrogenase-cytochrome system, effect, *Horecker, Stoltz, and Hogness*, 1939, 128, 251
- Edestin:** Fatty livers, effect, *Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- Solutions, sulfhydryl groups, *Greenstein*, 1939, 128, 233
- Egg:** Albumin. See Egg albumin
 Grasshopper, oil, protyrosinase activators, unimolecular films and fractions, *Allen, Boyd, and Bodine*, 1942, 143, 785
 Proteins, carbohydrate group, *Levene*, 1941, 140, 279
Urechis, respiratory pigment, *Horowitz and Baumberger*, 1941, 141, 407
 Vitamin A, diet effect, *Almquist, Mackinnney, and Mecchi*, 1943, 150, 99
- White,** antibiotin factor, isolation, *Woolley and Longworth*, 1942, 142, 285
- , constituent, biotin inactivation, effect, *Eakin, Snell, and Williams*, 1940, 136, 801
- , injury, curative factor, foodstuffs and yeast, *György*, 1939, 131, 733
- , —, —, isolation, *György, Kuhn, and Lederer*, 1939, 131, 745
- , —, —, physicochemical properties, *Birch and György*, 1939, 131, 761
- , protein, injury-producing, concentration and assay, *Eakin, Snell, and Williams*, 1941, 140, 535
- Yolk,** fat acids, lecithin and glyceride fractions, *Riemenschneider, Ellis, and Titus*, 1938, 126, 255
- , phosphorus compounds, formation, *Chargaff*, 1942, 142, 505
- sac, lipids, chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
- Egg albumin:** Alkylbenzenesulfonate detergents, electrophoresis, *Lundgren, Elam, and O'Connell*, 1943, 149, 183

Egg albumin—continued:

- Denaturation, ultraviolet radiant energy, effect, *Bernhart*, 1939, 128, 289
- Denatured, iodoacetic acid and, reaction, *Rosner*, 1940, 132, 657
- , solutions, viscosity, *Bull*, 1940, 133, 39
- Gelatin and casein interaction at surfaces, *Moyer and Moyer*, 1940, 132, 357
- Guanidine salts, effect, *Greenstein*, 1939, 130, 519
- Hydrolysis, alkaline, *Warner*, 1942, 142, 741
- Malonyl, chymotryptic digestion, *Ross and Tracy*, 1942, 145, 19
- Molecular splitting, ultraviolet radiant energy, effect, *Bernhart*, 1939, 128, 289
- weight, *Bernhart*, 1940, 132, 189
- Reducing groups, *Hellerman, Chinard, and Deitz*, 1943, 147, 443
- —, determination, porphyrindin use, *Brand and Kassell*, 1940, 133, 437
- Solutions, osmotic pressure, *Bull*, 1941, 137, 143
- , viscosity, *Bull*, 1940, 133, 39
- Sulfhydryl groups, *Anson*, 1940, 135, 797
- Elaidic acid:** Storage, *Kohl*, 1938, 126, 709, 721
- Testis phospholipids, absence, *Sinclair*, 1940, 134, 89
- Tissues, disappearance, *Kohl*, 1938, 126, 731
- Elastin:** Tissues, various species, *Lowry, Gilligan, and Katersky*, 1941, 139, 795
- Electrode:** Calcium amalgam, proteins and calcium chloride interaction, determination, *Joseph*, 1938, 126, 389
- Mercury, dropping, oxidation-reduction potentials, determination, *Müller*, 1942, 145, 425
- Electrokinetics:** Surface chemistry, *Moyer and Moyer*, 1940, 132, 357, 373
- Moyer*, 1940, 133, 29
- Moyer and Gorin*, 1940, 133, 605

- Electrolyte(s):** Blood and muscle, exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- — tendon, exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 389
- cells, equilibrium, diphosphoglyceric acid rôle, pyloric obstruction effect, *Rapoport and Guest*, 1939, 131, 675
- , dolphin, *Eichelberger, Fletcher, Geiling, and Vos*, 1940, 133, 145
- , equilibrium, adrenal insufficiency, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
- serum, *Sunderman*, 1942, 143, 185
- —, sodium bicarbonate-induced alkalosis, *Kirsner*, 1942, 145, 219
- Body, distribution, dehydration and hydration, nephrectomy effect, *Chanutin and Ludewig*, 1939, 131, 519
- Extracellular, muscle, liver, and heart, depletion effect, *Yannet and Darrow*, 1940, 134, 721
- Heart ventricle, *Wood*, 1942, 143, 165
- Kidney, normal and hydronephrotic, *Eichelberger and Bibler*, 1940, 132, 645
- Lung parenchyma, *Wood*, 1942, 143, 165
- Muscle and blood, exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- — — plasma, exchange, *Mellors, Muntwyler, and Mautz*, 1942, 144, 773
- , dolphin, *Eichelberger, Geiling, and Vos*, 1940, 133, 661
- , hydronephrosis, potassium salts, injection effect, *Eichelberger*, 1941, 140, 467
- Tendon and blood, exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 389
- Tissue, adrenal insufficiency, *Darrow, Harrison, and Taffel*, 1939, 130, 487
- , distribution, *Manery and Hastings*, 1939, 127, 657

Electrolyte(s)—continued:

- Tissue, equilibrium, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
Muntwyler, Mellors, Mautz, and Mangun, 1940, 134, 367, 389
 Uterus, estrogenic substance influence, *Talbot, Lowry, and Astwood*, 1940, 132, 1

Electrophoresis: Convection effects, *Alvarez-Tostado*, 1940, 135, 799**Elimination maximum:** Chemical constitution influence, *Gray and Cawley*, 1940, 134, 397

- Embryo:** Chick, aminopeptidase, *Levy and Palmer*, 1943, 150, 271
 —, chemistry, *Palmer and Levy*, 1940, 136, 407
Levy and Palmer, 1940, 136, 415
Palmer and Levy, 1940, 136, 629
Levy and Palmer, 1943, 150, 271
 —, —, cephalic region, *Palmer and Levy*, 1940, 136, 629
 —, cytochrome oxidase, *Albaum and Worley*, 1942, 144, 697
 —, dipeptidase, *Levy and Palmer*, 1940, 136, 415
 —, extracts, dipeptidase, *Palmer and Levy*, 1940, 136, 407
 —, nicotinic acid synthesis, *Dann and Handler*, 1941, 149, 935
 —, nitrogen, *Levy and Palmer*, 1940, 136, 415
 —, weight, *Levy and Palmer*, 1940, 136, 415
 Growth, blood plasma phosphatase, effect, *Weil*, 1941, 138, 375
 —, — — proteolysis, *Weil and Russell*, 1938, 126, 245

Enamel: Fluoride adsorption, radioactive isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543

- Phosphate adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*, 1941, 138, 451

- Sodium adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 1943, 148, 321

Endiol compound(s): Ninhydrin reaction, *West and Rinehart*, 1942, 146, 105

- Endocrine(s):** Ascorbic acid, avitaminosis influence, *Sure, Theis, and Harrelson*, 1939, 129, 245

- Lipid metabolism, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133

- Lorenz, Chaikoff, and Entenman*, 1938, 126, 763

- Entenman, Lorenz, and Chaikoff*, 1940, 134, 495

Enzyme(s): Acetic acid formation from acetoacetic acid, effect, *Lehninger*, 1942, 143, 147

- Action, *Truhlar, Drehter, McGuire, and Falk*, 1939, 127, 345

- Activation, *Richards and Hellerman*, 1940, 134, 237

- Angiotonin formation from renin and renin activator, nature, *Plenil and Page*, 1943, 147, 135

- Asymmetric, synthesis, *dl*-phenylalanine resolution, *Behrens, Doherty, and Bergmann*, 1940, 136, 61

- Bacterial, preparation, acetylmethylcarbinol formation from pyruvic acid by, *Silverman and Werkman*, 1941, 138, 35

- Blood nicotinic acid determination, use, *Allinson*, 1943, 147, 785

- serum cholesterol esters, synthesis and hydrolysis, *Sperry and Stoyanoff*, 1938, 126, 77

- — gonadotropin, pregnancy, effect, *Evans and Hauschildt*, 1942, 145, 335

- Carbon dioxide fixation, oxalacetate, *Krampitz, Wood, and Werkman*, 1943, 147, 243

- Co-. See Coenzyme

- Co-carboxylase conversion to vitamin B₁, effect, *Melnick and Field*, 1939, 127, 531

- Cytochrome c reduction, *Haas, Horecker, and Hogness*, 1939, 130, 425

- 1940, 136, 747

- Desoxyribonucleic acids, dephosphorylation, *Schmidt, Pickels, and Levene*, 1939, 127, 251

Enzyme(s)—continued:

- Fats, unsaturated, peroxidation, carotene oxidation, relation, *Sumner*, 1942, 146, 215
- Glucose-1-phosphate synthesis, glycogen effect, *Cori and Cori*, 1939, 131, 397
- Glucose-6-phosphate conversion to glycogen, *Sutherland, Colowick, and Cori*, 1941, 140, 309
- d(-)-Glutamic acid, dl-glutamic acid preparation, *Fruton, Irving, and Bergmann*, 1940, 133, 703
- Glutathione hydrolysis, pyrrolidone-carboxylic acid and glutamic acid formation, hydrogen ion concentration effect, *Woodward and Reinhart*, 1942, 145, 471
- Glycogen synthesis from glucose-1-phosphate, kinetics, *Cori and Cori*, 1940, 135, 733
- Hexose phosphorylation, adenylyl pyrophosphate rôle, *Colowick and Kalckar*, 1943, 148, 117
- Histochemistry, *Weil and Jennings*, 1941, 139, 421
- Jones-Dubos, *Schmidt and Levene*, 1938, 126, 423
- Kidney distribution, *Weil and Jennings*, 1941, 139, 421
- Lactic acid-racemizing, *Clostridium butylicum*, *Christensen, Johnson, and Peterson*, 1939, 127, 421
- Liver cell nuclei, isolated, *Dounce*, 1943, 147, 685
- , fatty acid oxidation, *Muñoz and Leloir*, 1943, 147, 355
- New, *Haas, Horecker, and Hogness*, 1939, 130, 425
- Ontogenesis, rôle, *Allen, Boyd, and Bodine*, 1942, 143, 785
- Pasteur, retina, spectrum, *Stern and Melnick*, 1941, 139, 301
- , yeast, absorption spectrum, *Melnick*, 1941, 141, 269
- d-Peptides, hydrolysis, *Berger, Johnson, and Baumann*, 1941, 137, 389
- Phosphorylating, muscle extract, *Cori, Colowick, and Cori*, 1939, 127, 771
- Pituitary, follicle-stimulating activity, relation, *McShan and Meyer*, 1940, 132, 783

Enzyme(s)—continued:

- Polysaccharide synthesis from glucose by, *Colowick and Sutherland*, 1942, 144, 423
- Preparations, purified, transamination, *Cohen*, 1940, 136, 565
- Proteins, hydrolysis, *Bernheim, Neurath, and Erickson*, 1942, 144, 259
- Proteolytic, histamine and, *Rocha e Silva and Andrade*, 1943, 149, 9
- , kidney, *Fruton, Irving, and Bergmann*, 1941, 141, 763
- , spleen, *Fruton and Bergmann*, 1939, 130, 19
- , *Fruton, Irving, and Bergmann*, 1941, 141, 763
- , tissue, *Fruton and Bergmann*, 1939, 130, 19
- , *Fruton, Irving, and Bergmann*, 1941, 138, 249
- , *Irving, Fruton, and Bergmann*, 1941, 141, 763
- , *Irving, Fruton, and Bergmann*, 1942, 144, 161
- , tumors, specificity, *Fruton, Irving, and Bergmann*, 1940, 132, 465
- Respiratory, tissue, determination, *Schneider and Potter*, 1943, 149, 217
- , *DuBois and Potter*, 1943, 150, 185
- Ribonucleic acid hydrolysis, chemical constitution, relation, *Bolomey and Allen*, 1942, 144, 113
- Sulfur, sulfide, radioactive, conversion to cysteine sulfur, *Smythe and Halliday*, 1942, 144, 237
- Tissue, ascorbic acid deficiency, relation, *Harrer and King*, 1941, 138, 111
- creatine and creatinine, determination, *Miller, Allinson, and Baker*, 1939, 130, 383
- See also Adenosinetriphosphatase, Aldolase, etc.
- Eosin: Biological fluids, chlorides, determination, micro-, *Saifer, Hughes, and Scudero*, 1941, 141, 495
- Epinephrine: Liver phosphorus, acid-soluble, distribution, effect, *Nelson, Rapoport, Guest, and Mirsky*, 1942, 144, 291
- See also Adrenalin

- Epithelium:** Neoplastic, cytochrome *c*, body mass, relation, *Rosenthal and Drabkin*, 1943, 150, 131
- Equilin:** Iso-, A, *Hirschmann and Wintersteiner*, 1938, 126, 737
 Δ^6 -Iso-, from 7-hydroxyestrone, *Pearlman and Wintersteiner*, 1940, 132, 605
- Equol:** 7-Hydroxy-3-(4'-hydroxyphenyl) chroman, identity, *Anderson and Marrian*, 1939, 127, 649
- Equol methyl ether:** Racemic, synthesis, *Anderson and Marrian*, 1939, 127, 649
- Ergoline(s):** 6,8-Dimethyl-, *d*-lysergic and *dl*-lysergic acid transformation, *Gould, Craig, and Jacobs*, 1942, 145, 487
 —, synthetic, lysergic acid base, comparison, *Jacobs and Gould*, 1939, 130, 399
- Ergot:** Alkaloids, *Jacobs and Gould*, 1938, 126, 67
Jacobs and Craig, 1939, 128, 715
Jacobs and Gould, 1939, 130, 399
Gould, Craig, and Jacobs, 1942, 145, 487
- Erythro- α -amino- β , γ -dihydroxy-*n*-butyric acid:** *D*-, synthesis, *Niemann and Nichols*, 1942, 143, 191
- Erythrocyte:** See Blood cell, red
- Escherichia coli:** Growth, atabrine, spermidine and polyamines, effect, *Silverman and Evans*, 1943, 150, 265
 Phosphopyruvate reactions, metal ions, effect, *Utter and Werkman*, 1942, 146, 289
- Esterase:** Azol-, blood serum proteins, activity, *Glick, Glaubach, and Moore*, 1942, 144, 525
 Blood, determination, micro-, adenocarcinoma, *Troescher and Norris*, 1940, 132, 553
 Cholesterol, liver and brain, *Sperry and Brand*, 1941, 137, 377
 Cholin-. See Cholinesterase
 Muscle, *Matlack and Tucker*, 1940, 132, 663
 Tropine, properties, *Glick*, 1940, 134, 617
- Estradiol:** α -, estrone and β -estradiol conversion, ovariectomy-hysterectomy effect, *Fish and Dorfman*, 1942, 143, 15
 —, —, conversion, *Fish and Dorfman*, 1941, 140, 83
 —, fate, *Heard and Hoffman*, 1941, 141, 329
 —, metabolism, *Heard, Bauld, and Hoffman*, 1941, 141, 709
- 6-Keto- α -**, *Longwell and Wintersteiner*, 1940, 133, 219
- Estratrienol-3-one-17:** Δ^5 -7,9-, urine, pregnancy, isolation, *Heard and Hoffman*, 1940, 135, 801
 1941, 138, 651
- Estrin:** Blood lipids, fowl, effect, *Lorenz, Chaikoff, and Entenman*, 1938, 126, 763
- Estriol:** Color reaction, *Bachman*, 1939, 131, 463
- Estrone conversion in vivo**, *Pearlman and Pincus*, 1942, 144, 569
- Estrogenic steroid(s):** Estrogenic substances, determination, Kober reaction use, *Bachman*, 1939, 131, 455
- Estrogenic substance(s):** Bile, estrone administration effect, *Longwell and McKee*, 1942, 142, 757
 Color test, *Kleiner*, 1941, 138, 783
 Conjugated, urine, pregnancy, hydrolysis, *Edson and Heard*, 1939, 130, 579
 Determination, photometric, *Bachman*, 1939, 131, 455, 463
Bachman and Pettit, 1941, 138, 689
- Ketonic**, ovary, *Westerfeld, Thayer, MacCorquodale, and Doisy*, 1938, 126, 181
- Oxygen in Ring B**, *Pearlman and Wintersteiner*, 1939, 130, 35
 1940, 132, 605
Longwell and Wintersteiner, 1940, 133, 219
- Solubilities**, *Doisy, Huffman, Thayer, and Doisy*, 1941, 138, 283
- Solvents**, immiscible, distribution, *Mather*, 1942, 144, 617

Estrogenic substance(s)—continued:

- Total, determination, estrogenic steroids, Kober reaction use, *Bachman*, 1939, 131, 455
- Urine, estrone administration effect, *Longwell and McKee*, 1942, 142, 757
- , pregnancy, determination, photo-metric, *Bachman and Pettit*, 1941, 138, 689
- Uterus electrolytes, influence, *Talbot, Lowry, and Astwood*, 1940, 132, 1
- Estrone:** Bile estrogens, administration effect, *Longwell and McKee*, 1942, 142, 757
- α -Estradiol conversion, *Fish and Dorfman*, 1941, 140, 83
- —, ovariectomy-hysterectomy effect, *Fish and Dorfman*, 1942, 143, 15
- Estriol, conversion, *in vivo*, *Pearlman and Pincus*, 1942, 144, 569
- 7-Hydroxy-, *Pearlman and Wintersteiner*, 1939, 130, 35
- , Δ^8 -isoequilin from, *Pearlman and Wintersteiner*, 1940, 132, 605
- 7-Keto-, *Pearlman and Wintersteiner*, 1939, 130, 35
- Metabolism, man, *Pearlman and Pincus*, 1943, 147, 379
- Oxidation, hydrogen peroxide in, *Westerfeld*, 1942, 143, 177
- Urine, determination, colorimetric, *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 1940, 134, 319
- estrogens, administration effect, *Longwell and McKee*, 1942, 142, 757
- Estrone sulfate:** Urine, pregnancy, isolation, *Schachter and Marrian*, 1938, 126, 663
- Ethanolamine:** Biological relationships, *Stetten*, 1941, 138, 437
- 1941, 140, 143
- Dietary, liver lipids, effect, *Stetten and Grail*, 1942, 144, 175
- Phosphatidyl, brain cephalin, separation, *Folch*, 1942, 146, 35
- Related compounds, biological relationships, *Stetten*, 1941, 138, 437
- Ethyl alcohol:** Blood, determination, *Gettler and Umberger*, 1942, 143, 633
- , —, colorimetric, *Gibson and Blotner*, 1938, 126, 551
- Metabolism, pyruvate rôle, *Westerfeld, Stotz, and Berg*, 1942, 144, 657
- Urine, determination, colorimetric, *Gibson and Blotner*, 1938, 126, 551
- Ethyl benzamidomalonate:** α -Amino acids, synthesis, use, *Redemann and Dunn*, 1939, 130, 341
- Ethylene:** Trichloro-, fate, organism, *Barrett and Johnston*, 1939, 127, 765
- Ethylglycine:** N-, hippuric acid synthesis, availability, *Abbott and Lewis*, 1941, 137, 535
- Etioallocholan-3, 17-dione:** Androsterone, conversion, *Dorfman*, 1940, 132, 457
- Etioallocholanol-3(β)-17-one:** Testosterone conversion, *Dorfman and Fish*, 1940, 135, 349
- Urine, isolation, *Pearlman*, 1940, 136, 807
- Etioporphyrin:** Iron, nitrogenous bases, coordination, *Vestling*, 1940, 135, 623
- Eukeratin(s):** Amino acids, *Block*, 1939, 128, 181
- Evonymus fortunei:** Prolycopene and pro- γ -carotene, isolation, *Zechmeister and Escue*, 1942, 144, 321
- Excelsin:** Solutions, sulphydryl groups, *Greenstein*, 1939, 128, 233
- Exercise:** Blood lactic acid-pyruvic acid ratio, effect, *Friedemann and Barborka*, 1941, 141, 993
- Muscle glycogen resynthesis, effect, *Flock and Bollman*, 1940, 136, 469
- phospholipid and cholesterol, inheritance and, effect, *Bloor*, 1940, 132, 77
- See also* Muscle, Work
- Extracellular fluid:** Depletion, muscle and blood serum potassium, effect, *Miller*, 1943, 147, 121
- Determination, bromide use, *Brodie, Brand, and Leshin*, 1939, 130, 555
- Extractor:** Biological materials, *Kaye, Leibner, and Connor*, 1940, 132, 195

Extractor—continued:

Lipids, *Kaye, Leibner, and Sobel*,
1941, 138, 643

Urine steroids, *Hershberg and Wolfe*,
1940, 133, 667
1941, 141, 215

Extravascular fluid: Water, blood and,
exchange, *Fleznor, Gellhorn, and
Merrell*, 1942, 144, 35

Eyestalk: Crustacean, chromatophoro-
tropic hormone, *Abramowitz*,
1940, 132, 501

F

Factor U: Vitamin B₆, relation, *Stokstad,
Manning, and Rogers*,

1940, 132, 463

Factor V: Determination, *Hemophilus
influenzae* use, *Hoagland and Ward*,
1942, 146, 115

Synthesis from nicotinic acid, blood
cell, red, effect, *Kohn and Klein*,
1939, 130, 1

— — —, *in vitro*, blood cell, red,
effect, *Kohn and Klein*,

1940, 135, 685

Tissue, *Dann and Kohn*,
1940, 136, 425

See also Nicotinamide, Nicotinic acid

Factor W: Pantothenic acid relation,
Black, Frost, and Elvehjem,

1940, 132, 65

Vitamin B complex, relation, *Frost
and Elvehjem*, 1939, 128, 23

— B₆ relation, *Black, Frost, and
Elvehjem*, 1940, 132, 65

Fasting: Adrenal lipids, effect, *Mac-
Lachlan, Hodge, and Whitehead*,

1941, 139, 185

Oleson and Bloor, 1941, 141, 349

Blood lipids, effect, *Entenman,
Changus, Gibbs, and Chaikoff*,

1940, 134, 59

Carbohydrate metabolism, effect,
Chambers, Chandler, and Barker,

1939, 131, 95

Fat synthesis, high carbohydrate-high
protein diets, *Longenecker*,

1939, 128, 645

Fasting—continued:

β -Hydroxybutyric acid disappearance
rate, *Deuel, Hallman, Greeley, Butts,
and Halliday*, 1940, 133, 173

Ketosis, alkalosis and acidosis effect,
MacKay, Wick, Carne, and Barnum,
1941, 138, 63

—, diet and liver fat, relation, *Mac-
Kay, Carne, Wick, and Visscher*,
1941, 141, 889

Lactose utilization, *Coryell and
Christman*, 1943, 150, 143

Lipids, *Hodge, MacLachlan, Bloor,
Stoneburg, Oleson, and Whitehead*,
1941, 139, 897

*MacLachlan, Hodge, Bloor, Welch,
Truax, and Taylor*, 1942, 143, 473

Liver fat to water relation, effect,
*MacLachlan, Hodge, Bloor, Welch,
Truax, and Taylor*, 1942, 143, 473

— glycogen and lipids, glucose feed-
ing, effect, *Treadwell, Tidwell, and
Grafa*, 1943, 149, 209

— — —, effect, *Heymann and Modic*,
1939, 131, 297

— glycogenesis, effect, *McBride*,
1943, 147, 333

— metabolism, anoxia effect, *Craig*,
1943, 150, 209

— phospholipids, fractionation, effect,
*MacLachlan, Hodge, Bloor, Welch,
Truax, and Taylor*, 1942, 143, 473

— phosphorus, acid-soluble, distribu-
tion, diet effect, *Rapoport, Leva,
and Guest*, 1943, 149, 65

— — —, effect, *Nelson, Rapoport,
Guest, and Mirsky*, 1942, 144, 291

Rapoport, Leva, and Guest,
1943, 149, 57

— water balance, glucose feeding and,
effect, *McBride*, 1943, 147, 333

Muscle glycogen effect, *Heymann and
Modic*, 1939, 131, 297

Protein metabolism, effect, *Chambers,
Chandler, and Barker*,

1939, 131, 95

Fat(s): Absorption, *Kohl*,

1938, 126, 709, 721, 731

—, adrenals and, *Barnes, Miller, and
Burr*, 1941, 140, 241

Fat(s)—continued:

- Absorption, duodenal lipids, relation, *Reiser*, 1942, 143, 109
- , fatty acids, essential, deficiency, *Barnes, Miller, and Burr*, 1941, 140, 773
- Acids, egg yolk, lecithin and glyceride fractions, *Riemenschneider, Ellis, and Titus*, 1938, 126, 255
- Body, keeping quality, diet effect, *Barnes, Lundberg, Hanson, and Burr*, 1943, 149, 313
- , rancidity, diet effect, *Overman*, 1942, 142, 441
- , synthesis, thiamine effect, *McHenry and Gavin*, 1939, 128, 45
- , vitamin B₆ effect, *Gavin and McHenry*, 1940, 132, 41
- Butter. See Butter fat
- Carotene and, oxidation, carotene oxidase effect, *Sumner and Sumner*, 1940, 134, 531
- Cholic acid production, injection effect, *Virtue and Doster-Virtue*, 1940, 133, 573
- Depot, oleic and linoleic acid relation, *Longenecker*, 1939, 129, 13
- Dietary, blood plasma phospholipids, effect, *Artom and Freeman*, 1940, 135, 59
- , carbon tetrachloride-treated rats, fatty acid utilization, effect, *Winter*, 1942, 142, 17
- , uric acid excretion, effect, *Adlerberg and Ellenberg*, 1939, 128, 379
- Droplets, cream, surface film composition, *Moyer*, 1940, 133, 29
- Feces, fractionation, apparatus, *Kaye, Leibner, and Sobel*, 1941, 138, 643
- Hemorrhagic degeneration, effect, *Griffith*, 1940, 132, 639
- High diet, cholesterol metabolism, effect, *Treadwell and Eckstein*, 1941, 140, 35
- , fatty livers, effect, *Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , liver fat effect, *Tucker and Eckstein*, 1938, 126, 117

Fat(s)—continued:

- Liver, *Marble, Grafflin, and Smith*, 1940, 134, 253
- , bromo-substituted fatty acids, effect, *Artom and Swanson*, 1943, 148, 633
- , carbohydrate synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- , choline effect, *Handler and Bernheim*, 1943, 148, 649
- , fasting ketosis, diet relation, *MacKay, Carne, Wick, and Visscher*, 1941, 141, 889
- , mineral and choline deficiency, effect, *Handler*, 1943, 149, 291
- transport, adrenals, effect, *Barnes, Miller, and Burr*, 1941, 140, 247
- , vitamin B₆ effect, *Gavin and McHenry*, 1940, 132, 41
- , water and, relation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473
- Low diet, cholesterol metabolism, effect, *Treadwell and Eckstein*, 1941, 140, 35
- Metabolism, biotin effect, *Gavin and McHenry*, 1941, 141, 619
- , blood plasma phosphatase, relation, *Weil and Russell*, 1940, 136, 9
- , liver and pancreas extracts, effect, *McHenry and Gavin*, 1940, 134, 683
- , — injury effect, *Winter*, 1939, 128, 283
- , —, 1940, 135, 123
- , —, 1942, 142, 17
- , lung, *MacLachlan*, 1942, 146, 45
- , vitamin B and, *McHenry and Gavin*, 1939, 128, 45
- , *Gavin and McHenry*, 1940, 132, 41
- , *McHenry and Gavin*, 1941, 138, 471
- Neutral, blood, castor bean and pancreatic lipase action, *Kelsey*, 1939, 130, 199
- , feces, drying and extraction apparatus, *Kaye, Leibner, and Connor*, 1940, 132, 195
- , glycerol, blood, determination, periodate use, *Voris, Ellis, and Maynard*, 1940, 133, 491

Fat(s)—continued:

- Rancid, biotin inactivation, *Pavcek and Skull*, 1942, 146, 351
 Sphingosine, synthesis, *Reichel and Thannhauser*, 1940, 135, 15
 Synthesis, biotin effect, *Gavin and McHenry*, 1941, 141, 619

— from protein, vitamin B effect, *McHenry and Gavin*, 1941, 138, 471
 —, high carbohydrate-high protein diets, fasting, *Longenecker*, 1939, 128, 645

—, liver extract relation, *McHenry and Gavin*, 1940, 134, 683
Longenecker, Gavin, and McHenry, 1941, 139, 611

—, pancreas extract relation, *McHenry and Gavin*, 1940, 134, 683
Longenecker, Gavin, and McHenry, 1941, 139, 611

—, thiamine effect, *Quackenbush, Steenbock, and Platz*, 1942, 145, 163

—, vitamin B complex relation, *Longenecker, Gavin, and McHenry*, 1941, 139, 611

Unsaturated, peroxidation, enzymic, carotene oxidation, relation, *Sumner*, 1942, 146, 215

Fatty acid(s): Absorption, intestinal mucosa, *Barnes, Miller, and Burr*, 1941, 140, 233

—, portal, *Winter and Crandall*, 1941, 140, 97

Alcohols, aliphatic, higher, biological relations, *Stetten and Schoenheimer*, 1940, 133, 347

Blood plasma, distribution and characterization, *Kelsey and Longenecker*, 1941, 139, 727

Body, replacement rate, *Stetten and Grail*, 1943, 148, 509

Branched chain, ketogenic action, *Wick*, 1941, 141, 897

Bromo-substituted, liver fat, effect, *Artom and Swanson*, 1943, 148, 633

Chemistry, *Shinowara and Brown*, 1940, 134, 331

Mowry, Brode, and Brown, 1942, 142, 671, 679

Coconut oil, *Longenecker*, 1939, 130, 167

Fatty acid(s)—continued:

Corn oil, *Longenecker*, 1939, 129, 13
 Deposition and utilization, *Longenecker*, 1939, 128, 645
 1939, 129, 13

Determination, isotope dilution procedure, *Rittenberg and Foster*, 1940, 133, 737

Essential, acrodynia, effect, *Schneider, Steenbock, and Platz*, 1940, 132, 539

—, deficiency, fat absorption, *Barnes, Miller, and Burr*, 1941, 140, 773

Esters, unsaturated, heat effect, *Norris, Rusoff, Miller, and Burr*, 1943, 147, 273

Ketogenic action, *MacKay, Wick, and Barnum*, 1940, 135, 183
 1940, 136, 503

Liver choline oxidase, action, *Bernheim*, 1940, 133, 291

—, diabetes, ketone body relation, *Stadie, Zapp, and Lukens*, 1941, 137, 75

—, replacement rate, *Stetten and Grail*, 1943, 148, 509

Low molecular weight, deposition and utilization, *Longenecker*, 1939, 130, 167

Methylated, synthesis, *Schneider and Spielman*, 1942, 142, 345

Oxidation, liver enzymes, *Muñoz and Leloir*, 1943, 147, 355

Phosphatide, tubercle bacillus, *Peck and Anderson*, 1941, 138, 135

Storage, linoleic and palmitic acids, effect, *Visscher and Corley*, 1943, 147, 291

Synthesis, body, linoleic and palmitic acids, effect, *Visscher and Corley*, 1943, 147, 291

—, thiamine effect, *Longenecker, Gavin, and McHenry*, 1940, 134, 693

Tissue, carbon tetrachloride administration, effect, *Winter*, 1939, 128, 283

Transport, intestinal mucosa, *Barnes, Miller, and Burr*, 1941, 140, 233

Unsaturated, body, behavior, deuterium as indicator, *Bernhard and Schoenheimer*, 1940, 133, 707

Fatty acid(s)—*continued*:

- Unsaturated, distillation, fractional,
Norris, Rusoff, Miller, and Burr,
 1941, 139, 199
 1943, 147, 273
 —, hemin and hemoglobin destruction,
Haurowitz, Schwerin, and Yenson,
 1941, 140, 353
 Utilization, carbon tetrachloride ad-
 ministration effect, *Winter*,
 1940, 135, 123
 —, — tetrachloride-treated rats,
 dietary fat effect, *Winter*,
 1942, 142, 17
Feather(s): Lanthionine isolation,
Horn and Jones, 1941, 139, 473
 Pigmentation, nutritional factor,
McGinnis, Norris, and Heuser,
 1942, 145, 341
Feces: Blood determination, colorime-
 tric, *Andrews and Brooks*,
 1941, 138, 341
 Fat, fractionation, apparatus, *Kaye*,
Leibner, and Sobel, 1941, 138, 643
 —, neutral, drying and extraction
 apparatus, *Kaye, Leibner, and Con-*
nor, 1940, 132, 195
 Hemoglobin and heme pigments, deter-
 mination, *Flink and Watson*,
 1942, 146, 171
 Leucemia, specific substances,
 preparation, *Turner and Miller*,
 1943, 147, 573
 Phosphatase, aminoethyl phosphate
 and β -glycerophosphate hydrolysis
 by, *Bowers, Outhouse, and Forbes*,
 1940, 132, 675
 —, preparation and effect, *Chen*,
Freeman, and Ivy, 1940, 132, 445
 Protoporphyrin IX isolation, normal
 and anemic rats, *Schultze*,
 1942, 142, 89
 Tocopherol, *Hines and Maltill*,
 1943, 149, 549
 Zinc excretion, radioactive zinc isotope
 in study, *Sheline, Chaikoff, Jones*,
and Montgomery, 1943, 147, 409
Feed(s): Nicotinic acid, *Hale, Davis*,
and Baldwin, 1942, 146, 565
See also Food, Foodstuff

- Ferric compound(s)**: Colloidal, magnetic
 properties, *Michaelis, Coryell, and*
Granick, 1943, 148, 463
Ferrihemic acid: Solubility and titration,
Morrison and Williams,
 1941, 137, 461
Ferriprotoporphyrin: Nitrogenous deriva-
 tives, cyanide reaction with, *Drabkin*,
 1942, 142, 855
Ferritin: *Granick*, 1942, 146, 451
Granick and Michaelis,
 1943, 147, 91
Michaelis, Coryell, and Granick,
 1943, 148, 463
Granick, 1943, 149, 157
Fankuchen, 1943, 150, 57
Hahn, Granick, Bale, and Michaelis,
 1943, 150, 407
 Apo-, Roentgen ray diffraction,
Fankuchen, 1943, 150, 57
 —, spleen, *Granick and Michaelis*,
 1943, 147, 91
 Immunological properties, *Granick*,
 1943, 149, 157
 Iron, inorganic and hemoglobin iron,
 conversion, biological, *Hahn*,
Granick, Bale, and Michaelis,
 1943, 150, 407
 —, storage function, radioactive and
 magnetic measurements, *Hahn*,
Granick, Bale, and Michaelis,
 1943, 150, 407
 Magnetic properties, *Michaelis*,
Coryell, and Granick, 1943, 148, 463
 Occurrence, *Granick*, 1943, 149, 157
 Roentgen ray diffraction, *Fankuchen*,
 1943, 150, 57
 Spleen, properties, *Granick*,
 1942, 146, 451
Fetus: Chorioid plexus, secretion onset,
Flexner and Stiehler, 1938, 126, 619
 Metanephros, cytochrome oxidase-
 cytochrome system, oxidation-
 reduction potentials, *Flexner*,
 1939, 131, 703
Fibrinogen: Coagulation, *Chargaff and*
Bendich, 1943, 149, 93
 —, thrombin action model, *Chargaff*
and Ziff, 1941, 138, 787

Fibrinogen—*continued*:

- Determination, protamine use, *Mylon, Winternitz, and de Sütö-Nagy*, 1942, 143, 21
- Fibroin**: Silk, *l*-serine isolation, *Stein, Moore, and Bergmann*, 1941, 139, 481
- Film formation**: Mechanism, *Moyer and Gorin*, 1940, 133, 605
- Filtrate factor**: *Jukes*, 1939, 128, 35
Vitamin B₂ complex, nature, *Mohammad, Emerson, Emerson, and Erans*, 1940, 133, 17
- Fish**: Anemia factor, *Simmons and Norris*, 1941, 140, 679
Thiamine destruction by substance in, *Woolley*, 1941, 141, 997
See also Carp, Hagfish, Salmon, Trout
- Fish liver oil(s)**: Vitamin A, cyclized, *Embree*, 1939, 128, 187
- Flavianic acid**: Arginine determination, use, *Vickery*, 1940, 132, 325
Pituitary hormone, anterior, follicle-stimulating, effect, *Jensen and Tolksdorf*, 1940, 132, 519
- Flavin**: Adenine dinucleotide, amino acids and equilibrium relation, *Stadie and Zapp*, 1943, 150, 165
— — synthesis from riboflavin, blood cells, effect, *Klein and Kohn*, 1940, 136, 177
See also Riboflavin
- Flavone(s)**: Determination, *Weatherby and Cheng*, 1943, 148, 707
- Flavoprotein**: Catalysis, substituted phenols, effect, *Krahl, Keltch, and Clowes*, 1940, 136, 563
Milk, diphosphopyridine nucleotide, reduced, oxidation, effect, *Ball and Ramsdell*, 1939, 131, 767
Yeast, *Green, Knor, and Stumpf*, 1941, 138, 775
- Flaxseed**: Mucilage, aldobionnic acid structure, *Tipson, Christman, and Levene*, 1939, 128, 609
- Flour**: Wheat, Hungarian, carotenoids, *Zechmeister and Chohnoky*, 1940, 135, 31
- Fluorescein**: Dichloro-, biological fluids, chlorides, determination, micro-, *Saifer and Hughes*, 1939, 129, 273

- Fluoride**: Enamel, dentin, bone, and hydroxyapatite, adsorption, radio-active isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543
- Folic acid**: Succinylsulfathiazole and, growth effect, *Nielsen and Elvehjem*, 1942, 145, 713
- Follicle-stimulating activity**: Pituitary, enzyme relation, *McShan and Meyer*, 1940, 132, 783
- Follicle-stimulating hormone**: Pituitary, anterior, picric and flavianic acids, effect, *Jensen and Tolksdorf*, 1940, 132, 519
—, preparation and properties, trypsin digestion, *McShan and Meyer*, 1940, 135, 473
—, purification, *Jensen, Tolksdorf, and Bamman*, 1940, 135, 791
—, separation, *Greep, van Dyke, and Chow*, 1940, 133, 289
- Food**: Acetone bodies, utilization, nephrectomy and, effect, *Mirsky, Nelson, and Grayman*, 1939, 130, 179
Pyridoxine determination, *Bina, Thomas, and Brown*, 1943, 148, 111
- Foodstuff(s)**: Egg white injury curative factor, *György*, 1939, 131, 733
Riboflavin determination, fluorometric, *Hodson and Norris*, 1939, 131, 621
Vitamin H, *György*, 1939, 131, 733
- Formalin**: Fixation, liver lipids, effect, *Halliday*, 1939, 129, 65
- Formic acid**: Casein nutrition rôle, effect, *Bennett and Toennies*, 1942, 145, 671
- Formylglycine**: Hippuric acid synthesis, effect, *Abbot*, 1942, 145, 241
- Fructose**: Blood, determination, skatole color reaction in, *Reinecke*, 1942, 142, 487
Intestine, glucose and phlorhizin, effect, *Beck*, 1942, 143, 403
Metabolism, *Blatherwick, Bradshaw, Ewing, and Sawyer*, 1940, 136, 615
See also Levulose
- Fucose**: *d*-, fermentation, colon and aerogenes bacteria, *Field and Poe*, 1940, 132, 473

Fucose—continued:

- l-, identification as benzimidazole derivative, *Dimler and Link*, 1943, 150, 345
- Fungus:** Pathogenic, chemistry, *Peck and Hauser*, 1940, 134, 403
- See also *Achlya*, *Blastomyces*, *Fusarium*, *Mold*, *Monilia*
- Fusarium:** Biochemistry, *Gould, Tytell, and Jaffe*, 1942, 146, 219
- Fusarium lini:** Dehydrogenation mechanism, *Goepfert*, 1941, 140, 525

G

- Galactose:** Blood serum phosphorus, effect, *Free and Leonards*, 1943, 149, 203
- sugar, effect, *Darby and Day*, 1940, 133, 503
- Gallbladder:** Bile, choline, free, *Johnston, Irvin, and Walton*, 1939, 131, 425
- , desiccated and normal, comparison, *Irvin, Merker, Anderson, and Johnston*, 1939, 131, 439
- , phospholipid, *Johnston, Irvin, and Walton*, 1939, 131, 425
- Gas(es):** Analysis apparatus, modified *Haldane, Bazett*, 1941, 139, 81
- Blood, determination, gasometric, micro, *Roughton and Scholander*, 1943, 148, 541
- Scholander and Roughton*, 1943, 148, 551
- Edwards, Scholander, and Roughton*, 1943, 148, 565
- Scholander and Roughton*, 1943, 148, 573
- Respiratory, determination, apparatus, *Scholander*, 1942, 146, 159
- Solubility, liquids, determination, manometric, *Van Slyke*, 1939, 130, 545
- Tissue, determination, *Scholander*, 1942, 142, 427
- Gastric juice:** Peptic activity, determination, *Riggs and Stadie*, 1943, 150, 463
- Gaucher's disease:** Spleen cerebroside, glucose-containing, relation, *Halliday, Deuel, Tragerman, and Ward*, 1940, 132, 171

- Gelatin:** Amino acids, determination, *Bergmann and Stein*, 1939, 128, 217
- Casein and egg albumin interaction at surfaces, *Moyer and Moyer*, 1940, 132, 357
- Proline, *Stein and Bergmann*, 1940, 134, 627
- Germine:** Chemical constitution and degradation, *Craig and Jacobs*, 1943, 148, 57
- Gizzard:** Erosion, chick, bile effect, *Almquist and Mecchi*, 1938, 126, 407
- , —, chondroitin effect, *Bird, Oleson, Elvehjem, and Hart*, 1938, 126, 671
- Gladiin:** Liver fat, effect, *Tucker and Eckstein*, 1938, 126, 117
- Globin(s):** Blood, sulfur, total, cystine, methionine, and species differences, *Beach, Bernstein, Hummel, Williams, and Macy*, 1939, 130, 115
- Electrophoresis, *Reiner, Moore, Lang, and Green*, 1942, 146, 583
- , various species, *Munro and Munro*, 1943, 150, 427
- Heme-**, linkage, hemoglobin, *Ross*, 1939, 127, 169, 179
- Ross and Turner*, 1941, 139, 603
- Solutions, sulfhydryl groups, *Greenstein*, 1939, 128, 233
- Globulin(s):** Blood serum, determination, *Robinson, Price, and Hogden*, 1938, 126, 207, 213
- —, —, biuret reaction, *Kingsley*, 1939, 131, 197
- —, —, colorimetric, *Looney and Walsh*, 1939, 130, 635
- —, partition, *Reineke, Peterson, and Turner*, 1939, 128, 1
- —, precipitation by sodium sulfate, *Robinson, Price, and Hogden*, 1938, 126, 213
- —, separation, *Kingsley*, 1940, 133, 731
- Calcium and, equilibria, *Drinker, Green, and Hastings*, 1939, 131, 641
- Cucurbit seed, amino acids, and nutrition value, *Vickery, Smith, Hubbell, and Nolan*, 1941, 140, 613
- See also Lactoglobulin, Pseudoglobulin
- Glomerulus:** Protein molecule passage, *Bott and Richards*, 1941, 141, 291

Glomerulus—continued:

Urine, sodium, *Necturus*, *Bott*,
1943, 147, 653

Glucosamine: *d*-, *o*-phenylenediamine,
reaction, *Lohmar and Link*,
1943, 150, 351

Growth relation, *Rose and Fierke*,
1942, 143, 115

Glucose: Absorption, diet effect, *Sinclair*
and *Fassina*, 1941, 141, 509

—, intestine mucosa phosphates,
effect, *Eiler, Stockholm, and*
Althausen, 1940, 134, 283

—, phosphorus metabolism, effect,
Reiser, 1940, 135, 303

—, temperature effect, *Rafferty and*
MacLachlan, 1941, 140, 167

Acetone bodies, utilization, neph-
rectomy and, effect, *Mirsky, Nelson,*
and *Grayman*, 1939, 130, 179

Acids from, dental plaque relation,
Muntz, 1943, 148, 225

Aerodehydrogenase, antibacterial,
Penicillium notatum, *Birkinshaw*
and *Raistrick*, 1943, 148, 459

Antiketogenic activity, *Wick, Mac-*
Kay, Carne, and Mayfield,
1940, 136, 237

Blood composition, injection effect,
Bueding and Goldfarb,
1943, 147, 33

—, determination, micro-, *Reinecke*,
1942, 143, 351

—, β -hydroxybutyric acid and aceto-
acetic acid, effect, *Stark and Somogyi*,
1943, 147, 721

— pantothenic acid, administration
effect, *Wright*, 1942, 142, 445

— pyruvate and lactate, diabetes,
effect, *Klein*, 1942, 145, 35

—, thiamine deficiency, ingestion
effect, *Bueding, Stein, and Wortis*,
1941, 140, 697

— serum phosphorus, effect, *Free and*
Leonards, 1943, 149, 203

— sugar, temperature effect, *Rafferty*
and *MacLachlan*, 1941, 140, 167

— Containing cerebroside, spleen, isola-
tion, *Halliday, Deuel, Tragerman,*
and *Ward*, 1940, 132, 171

Glucose—continued:

Determination, titrimetric, micro-,
Humoller, 1943, 147, 281

Fate, injection effect, *Orten and*
Sayers, 1942, 145, 123

Fermentation, alkaline solutions,
Stark and Somogyi, 1942, 142, 579

—, *Streptococcus faecalis*, phosphorus
transformation, *O'Kane and*
Umbreit, 1942, 142, 25

Glycogen formation, radioactive car-
bon dioxide and, relation, *Vennes-*
land, Solomon, Buchanan, and
Hastings, 1942, 142, 379

Intestine phosphate, organic, and
fructose, effect, *Beck*, 1942, 143, 403

Ketonemia, ingestion effect, *Somogyi*,
1942, 145, 575

Ketone-sparing effect, *Somogyi and*
Weichselbaum, 1942, 145, 567

Liver glycogen deposition, effect,
MacKay, Wick, and Carne,
1940, 132, 613

—, fasting effect, *Treadwell, Tid-*
well, and Grafa, 1943, 149, 209

—, temperature effect, *Rafferty*
and *MacLachlan*, 1941, 140, 167

— lipids, fasting, effect, *Treadwell,*
Tidwell, and Grafa, 1943, 149, 209

— phosphorus, acid-soluble, distribu-
tion, fasting, effect, *Rapoport, Lewa,*
and *Guest*, 1943, 149, 65

— water balance, fasting and, feeding
effect, *McBride*, 1943, 147, 333

Metabolism, *Blatherwick, Bradshaw,*
Ewing, and Sawyer, 1940, 136, 615

—, *Trypanosoma lewisi*, carbon dioxide
rôle, *Searle and Reiner*,
1941, 141, 563

Microorganisms not fermenting, oxida-
tions, *Barron and Friedemann*,
1941, 137, 593

Mutarotation, pressure effect, *Sander*,
1943, 148, 311

Oxidation and phosphorylation, *Colo-*
wick, Welch, and Cori,
1940, 133, 641

Pantothenic acid determination,
Lactobacillus casei use, effect, *Stokes*
and *Martin*, 1943, 147, 483

Glucose—continued:

- Phosphorylation and oxidation, tissue extracts, cell-free, *Colowick, Kalckar, and Cori*, 1941, 137, 343
- , kidney extract effect, *Colowick, Welch, and Cori*, 1940, 133, 359
- Polysaccharide synthesis, enzymatic, from, *Colowick and Sutherland*, 1942, 144, 423
- Protein conversion, pancreatectomy and phlorhizin effect, *Gray, Ivy, and Cuthbert*, 1939, 128, 173
- Pyruvic acid formation, ingestion effect, *Bueding, Stein, and Wortis*, 1941, 137, 793
- Substitution, position 4, *Raymond, Tipson, and Levene*, 1939, 130, 47
- Tolerance, diabetes, sodium chloride effect, *Orten and Devlin*, 1940, 136, 461
- , fatty livers, relation, *Treadwell, King, Bebb, and Tidwell*, 1942, 143, 203
- , normal and fatty livers, sexual variation, *Deuel and Davis*, 1942, 146, 649
- Urine, β -hydroxybutyric acid and acetoacetic acid, effect, *Stark and Somogyi*, 1943, 147, 721
- Glucose-1-phosphate:** Blood sugar formation, rôle, *Cori, Cori, and Schmidt*, 1939, 129, 629
- Glycogen synthesis, enzymatic, *Cori and Cori*, 1939, 131, 397
- 1940, 135, 733
- Liver glycogen synthesis, rôle, *Cori, Cori, and Schmidt*, 1939, 129, 629
- Glucose-6-phosphate:** Glycogen conversion, enzymatic, *Sutherland, Colowick, and Cori*, 1941, 140, 309
- Glucoside:** β -Benzyl-, 2,3-diacetyl, and derivatives, *Raymond, Tipson, and Levene*, 1939, 130, 47
- 2,4-Dimethyl- β -methyl-, synthesis, *Adams, Reeves, and Goebel*, 1941, 140, 653
- Glucuronic acid(s):** Blood, saccharoid relation, *Fashena and Stiff*, 1941, 137, 21

Glucuronic acid(s)—continued:

- Conjugated, biological formation, mechanism, *Lipschitz and Bueding*, 1939, 129, 333
- Determination, *Maughan, Evelyn, and Browne*, 1938, 126, 567
- Glucuronidase:** β -, *Fishman*, 1939, 127, 367
- 1939, 131, 225
- 1940, 136, 229
- , preparation and purification, *Fishman*, 1939, 127, 367
- Glucuronide(s):** Conjugated, determination, *Maughan, Evelyn, and Browne*, 1938, 126, 567
- , hydrolysis, factors controlling, *Fishman*, 1939, 131, 225
- Steroid, urine, *Strickler, Shaffer, Wilson, and Strickler*, 1943, 148, 251
- Glucuronidogenic substance(s):** Tissue β -glucuronidase, effect, *Fishman*, 1940, 136, 229
- Glutamate:** Asparagine-, *Bacterium dysenteriae* and microorganisms, growth factor, *Bovarnick*, 1943, 148, 151
- Glutamic acid:** Acetylcholine formation, effect, *Nachmansohn, John, and Waelsch*, 1943, 150, 485
- Asparagine mixtures, nicotinamide-like substance, determination, *Bovarnick*, 1943, 149, 301
- Corynebacterium diphtheriae*, configuration, *Chargaff*, 1939, 130, 29
- d(-)-, dl-glutamic acid preparation, enzymatic, *Fruton, Irving, and Bergmann*, 1940, 133, 703
- , polypeptide, formation, *Bacillus subtilis*, *Bovarnick*, 1942, 145, 415
- Formation, glutathione hydrolysis, enzymatic, kidney extract, hydrogen ion concentration effect, *Woodward and Reinhardt*, 1942, 145, 471
- Hydrogen-carbon linkages, stability, *Ratner, Rittenberg, and Schoenheimer*, 1940, 135, 357
- Hydroxy-, milk proteins, *Nicolet and Shinn*, 1942, 142, 139
- Isotopic, glutathione metabolism, study with, *Waelsch and Rittenberg*, 1942, 144, 53

Glutamic acid—continued:

- l*(+)-, oxidation, *Hemophilus parainfluenzae*, Klein, 1940, 134, 43
- Lactic acid bacteria growth factor, Pollack and Lindner, 1942, 143, 655
- Optical forms, normal and cancer tissue, Johnson, 1940, 132, 781
- Ornithine conversion, biological, Roloff, Ratner, and Schoenheimer, 1940, 136, 561
- Phylomonas tumefaciens*, configuration, Chargaff, 1939, 130, 29
- Proteins, malignant tissue, Woodward, Reinhart, and Dohan, 1941, 138, 677
- Racemization, Arnow and Opsahl, 1940, 133, 765
- Johnson, 1940, 134, 459
- , heat effect, Arnow and Opsahl, 1940, 134, 649
- Tumor tissue, malignant, nature, White and White, 1939, 130, 435
- Tumors, malignant, Graff, 1939, 130, 13
- Graff, Rittenberg, and Foster, 1940, 133, 745
- Glutamine:** Formation, seedlings, etiolated, *Lupinus angustifolius*, *Vicia atropurpurea*, and *Cucurbita pepo*, Vickery and Pucher, 1943, 150, 197
- Lactic acid bacteria growth factor, Pollack and Lindner, 1942, 143, 655
- Like substance, blood plasma, Hamilton, 1942, 145, 711
- Urine ammonia source, Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller, 1943, 150, 481
- Glutaric acid:** α -Keto-, synthesis, carbon dioxide utilization, Evans and Slotin, 1940, 136, 301
- Glutaric carboxylase:** α -Keto-, tissue, Green, Westerfeld, Vennesland, and Knox, 1941, 140, 683
- Glutaric dehydrogenase:** α -Keto-, heart, Ochoa, 1943, 149, 577
- Glutathione:** Waelsch and Rittenberg, 1941, 139, 761
- 1942, 144, 53

Glutathione—continued:

- Aspartic acid analogue, synthesis, Miller, Behrens, and du Vigneaud, 1941, 140, 411
- S-*p*-Bromobenzyl-, N-acetyl-S-*p*-bromobenzyl-L-cysteine synthesis from, Stekol, 1941, 138, 225
- Growth relation, Stekol, 1939, 127, 131
- Hydrolysis, enzymatic, kidney extract, pyrrolidonecarboxylic acid and glutamic acid formation, hydrogen ion concentration effect, Woodward and Reinhart, 1942, 145, 471
- Metabolism, ammonia and glutamic acid, isotopic, study with, Waelsch and Rittenberg, 1942, 144, 53
- , isotopic glycine in study, Waelsch and Rittenberg, 1941, 139, 761
- Oxidized, reduction, electrolytic, and determination, Dohan and Woodward, 1939, 129, 393
- Reduced, determination, glyoxalase use, Schroeder and Woodward, 1939, 129, 283
- Glyceraldehyde(s):** Acetone-, Baer and Fischer, 1939, 128, 463, 475, 491
- 1941, 140, 397
- Glyceraldehyde 1,3-diphosphate:** Baer and Fischer, 1943, 150, 213
- dl*-, dimeric, Baer and Fischer, 1942, 143, 563
- Glyceraldehyde phosphate:** Phosphorylation, Meyerhof and Junowicz-Kocholaty, 1943, 149, 71
- Glyceraldehyde 3-phosphate:** *dl*-, synthesis, Baer and Fischer, 1943, 150, 223
- Glyceric acid:** Diphospho-, blood cell electrolyte equilibrium, pyloric obstruction effect, Rapoport and Guest, 1939, 131, 675
- Phospho-, preparation, DuBois and Potter, 1943, 147, 41
- Phosphorylated, blood cells, formation, species variation, Rapoport and Guest, 1942, 143, 671
- Glyceride(s):** *d*(+)-Acetone glycerol, optically active, synthesis, Baer and Fischer, 1939, 128, 475

Glyceride(s)—continued:

- Fractions, egg yolk, fat acids, *Riemen-schneider, Ellis, and Titus*, 1938, 126, 255
- Optically active, *Baer and Fischer*, 1941, 140, 397
- Glycerol:** *d*(+)-Acetone, glycerides, optically active, synthesis, *Baer and Fischer*, 1939, 128, 475
- , preparation, *Baer and Fischer*, 1939, 128, 463
- Blood, determination, periodate use, *Voris, Ellis, and Maynard*, 1940, 133, 491
- Phospho-, acid-soluble, liver, determination, *Leva and Rapoport*, 1943, 149, 47
- Glycerophosphate:** β -, hydrolysis, feces and kidney phosphatase, *Bowers, Outhouse, and Forbes*, 1940, 132, 675
- Glycerophosphoric acid(s):** β -, α form, conversion mechanism, *Chargaff*, 1942, 144, 455
- d*(+)- α -, *l*(-)- α -, and *dl*- α -, synthetic, phosphatase action, *Baer and Fischer*, 1940, 135, 321
- , synthesis, *Baer and Fischer*, 1940, 135, 321
- l*(-)- α -, biological, synthesis, *Baer and Fischer*, 1939, 128, 491
- Phosphatides, nature, *Folch*, 1942, 146, 81
- Glycine:** Acetyl-, hippuric acid synthesis, effect, *Abbott*, 1942, 145, 241
- Antiketogenic activity, *Wick, MacKay, Carne, and Mayfield*, 1940, 136, 237
- Creatine and creatinine excretion, ingestion effect, *Hyde*, 1940, 134, 95
- synthesis, relation, *Fisher and Wilhelmi*, 1940, 132, 135
- Dietary, proteins, body and, interaction, *Ratner, Rittenberg, Keston, and Schoenheimer*, 1940, 134, 665
- N,N*-Dimethyl-, hippuric acid synthesis, availability, *Abbott and Lewis*, 1939, 131, 479
- N*-Ethyl-, hippuric acid synthesis, availability, *Abbott and Lewis*, 1941, 137, 535

Glycine—continued:

- Formyl-, hippuric acid synthesis, effect, *Abbott*, 1942, 145, 241
- Glycyl-, ionization, aqueous solution, *Smith and Smith*, 1942, 146, 187
- Isotopic, glutathione metabolism, study by, *Waelsch and Rittenberg*, 1941, 139, 761
- Liver glycogen deposition, effect, *MacKay, Wick, and Carne*, 1940, 132, 613
- Metabolism, carbon isotope in study, *Olsen, Hemingway, and Nier*, 1943, 148, 611
- N*-Methyl-, hippuric acid synthesis, availability, *Abbott and Lewis*, 1939, 131, 479
- Nutrition, chick, rôle, *Hegsted, Briggs, Elvehjem, and Hart*, 1941, 140, 191
- Phosphorus, inorganic, excretion, ingestion effect, *Hyde*, 1940, 134, 95
- Phospho-12-tungstates, solubility and composition, *Van Slyke, Hiller, and Dillon*, 1942, 146, 137
- Precursors, *Abbott and Lewis*, 1939, 131, 479
- , 1941, 137, 535
- Propionyl-, hippuric acid synthesis, effect, *Abbott*, 1942, 145, 241
- Rice factor, nature, *Almquist and Mecchi*, 1940, 135, 355
- Sarcosine demethylation, biological, relation, *Bloch and Schoenheimer*, 1940, 135, 99
- —, oxidative, relation, *Handler, Bernheim, and Klein*, 1941, 138, 211
- Vitamin B₄ deficiency, chick, effect, *Briggs, Luckey, Elvehjem, and Hart*, 1943, 150, 11
- Glycocytamine:** Biological fluids, determination, micro-, *Dubnoff and Borsook*, 1941, 138, 381
- Formation, biological, *Borsook, Dubnoff, Lilly, and Marriott*, 1941, 138, 405
- Liver creatine formation from, nephrectomy effect, *Bodansky, Duff, and McKinney*, 1941, 140, 365

Glycocyamine—continued:

Liver creatine formation, relation,
Borsook and Dubnoff,

1940, 132, 559

Tissue extracts, determination, micro-
Dubnoff and Borsook, 1941, 138, 381

Tissues, formation, *Borsook and Dubnoff*, 1941, 138, 389

Urine, excretion, *Borsook, Dubnoff, Lilly, and Marriott*, 1941, 138, 405

Glycogen: *Aphis brassicae*, isolation and properties, *Loring and Pierce*,

1943, 148, 35

Corn, injection effect, *Morris*,
1943, 148, 699

Formation from pyruvate *in vitro*,
radioactive carbon dioxide effect,
Buchanan, Hastings, and Nesbett,

1942, 145, 715

—, glucose and radioactive carbon
dioxide, relation, *Vennesland, Solo-
mon, Buchanan, and Hastings*,

1942, 142, 379

—, *See also* Glycogenesis, Glyconeogenesis

Glucose-6-phosphate conversion, enzymatic, *Sutherland, Colowick, and Cori*,
1941, 140, 309

Hydrolysis, blood amylase, *Morris*,
1943, 148, 271

Liver, *Marble, Grafflin, and Smith*,
1940, 134, 253

—, adrenal cortex principles, effect,
Grattan and Jensen, 1940, 135, 511

—, age effect, *Heymann and Modic*,
1939, 131, 297

—, butyric acid oxidation, effect,
Bobbitt and Deuel, 1942, 143, 1

—, deposition, glucose, glycine, and
dl-alanine effect, *MacKay, Wick, and Carne*,
1940, 132, 613

—, —, water relation, *Fenn and Haeghe*,
1940, 136, 87

—, fasting and glucose feeding, effect,
Treadwell, Tidwell, and Grafa,

1943, 149, 209

—, — effect, *Heymann and Modic*,
1939, 131, 297

—, formation, alanine isomers, effect,
MacKay, Wick, and Barnum,

1941, 137, 183

Glycogen—continued:

Liver, *d*(+)-histidine and *l*(-)-histidine effect, *Featherstone and Berg*,

1942, 146, 131

—, hydration, *McBride, Guest, and Scott*,
1941, 139, 943

—, *dl*-lysine monohydrochloride effect,
Sharp and Berg, 1941, 141, 739

—, pituitary adrenocorticotrophic hormone effect, *Grattan and Jensen*,

1940, 135, 511

—, potassium and phosphate relation,
Fenn, 1939, 128, 297

—, radioactive acetic, propionic, and butyric acids in study, *Buchanan, Hastings, and Nesbett*,

1943, 150, 413

—, synthesis, glucose-1-phosphate rôle,
Cori, Cori, and Schmidt,

1939, 129, 629

—, temperature effect, glucose and starch administration, *Rafferty and MacLachlan*,
1941, 140, 167

—, tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and *l*(-)-kynurenine effect, *Borchers, Berg, and Whitman*,
1942, 145, 657

—, water relation, *McBride, Guest, and Scott*,
1941, 139, 943

Macrosiphum pisi, isolation and properties, *Loring and Pierce*,

1943, 148, 35

Maize seed, *Morris and Morris*,
1939, 130, 535

Muscle, age and fasting, effect, *Heymann and Modic*,
1939, 131, 297

—, resynthesis, exercise effect, *Flock and Bollman*,
1940, 136, 469

Oxidation, brain suspensions, effect,
Elliott and Libet, 1940, 136, 797

Storage, diabetes, insulin effect, *Pauls and Drury*,
1942, 145, 481

Synthesis, enzymatic, from glucose-1-phosphate, *Cori and Cori*,

1939, 131, 397

—, —, —, kinetics, *Cori and Cori*,
1940, 135, 733

Glycogenesis: Citric acid relation, *MacKay, Carne, and Wick*,

1940, 133, 59

Glycogenesis—continued:

Liver, fasting effect, *McBride*,
1943, 147, 333

See also Glycogen, formation

Glycol(s): Air, determination, colorimetric, *Wise, Puck, and Stral*,
1943, 150, 61

Glycolic acid: Hippuric acid synthesis, availability, *Abbott and Lewis*,
1941, 137, 535

Oxidase, *Dohan*, 1940, 135, 793

Thio-, taurocholic acid production, effect, *Virtue and Doster-Virtue*,
1939, 128, 665

Glycolysis: Blood, diphosphoglycerate decomposition relation, *Rapoport and Guest*,
1939, 129, 781

—, sodium fluoride and sodium iodoacetate effect, *Bueding and Goldfarb*,
1941, 141, 539

Brain extracts, *Ochoa*, 1941, 141, 245

Carbohydrate metabolism, relation, *Fazekas and Himwich*,
1941, 139, 971

Spermatozoa, *Lardy and Phillips*,
1943, 148, 343

Glyconeogenesis: Kidney, adrenalectomy effect, *Russell and Wilhelmi*,
1941, 140, 747

See also Glycogen, formation

Glycoprotein: Blood plasma, mammary gland, lactating, utilization, *Reineke, Williamson, and Turner*,
1941, 138, 83

Hexoses, identification and determination, carbazole method, *Gurin and Hood*,
1939, 131, 211

Glycosuria: Phlorhizin, valine metabolism, *Rose, Johnson, and Haines*,
1942, 145, 679

Glycylglycine: Ionization, aqueous solution, *Smith and Smith*,
1942, 146, 187

Glycyl-L-histidine: Synthesis, *Hunt and du Vigneaud*,
1939, 127, 43

Glyoxalase: Coenzymes, *Behrens*,
1941, 141, 503

Glutathione, reduced, determination, use, *Schroeder and Woodward*,
1939, 129, 283

Gold: Biological fluids, determination, micro-, *Block and Buchanan*,
1940, 136, 379

Gonadotropic activity: Pituitary extracts, trypsin and ptyalin effect, *McShan and Meyer*,
1938, 126, 361

Gonadotropic extract(s): Cysteine and cyanide effect, *Bischoff*,
1940, 134, 641

Picrate and picrolonate, *Bischoff*,
1940, 132, 35

Gonadotropic hormone(s): Chorionic, oxidation-reduction, *Bowman*,
1941, 137, 293

Cysteine effect, *Fraenkel-Conrat, Simpson, and Evans*, 1939, 130, 243

Ketene action, *Li, Simpson, and Evans*,
1939, 131, 259

Urine, pregnancy, *Gurin, Bachman, and Wilson*,
1939, 128, 525

—, —, 1940, 133, 467, 477

Lundgren, Gurin, Bachman, and Wilson,
1942, 142, 367

—, —, chemistry, *Gurin, Bachman, and Wilson*,
1940, 133, 467

—, —, preparation, *Gurin, Bachman, and Wilson*,
1939, 128, 525

—, —, purity, *Gurin, Bachman, and Wilson*,
1940, 133, 477

Gonadotropin: Blood serum, pregnancy, enzymes, effect, *Evans and Hauschildt*,
1942, 145, 335

Chorionic, preparation, *Katzman, Godfrid, Cain, and Doisy*,
1943, 148, 501

Gorgonin: Amino acids, *Block and Bolling*,
1939, 127, 685

Gramicidin: d-Amino acids, *Lipmann, Hotchkiss, and Dubos*,
1941, 141, 163

Bacteria, metabolism, effect, *Dubos, Hotchkiss, and Coburn*,
1942, 146, 421

Chemical nature, *Hotchkiss*,
1941, 141, 171

Composition, *Christensen, Edwards, and Piersma*,
1941, 141, 187

Properties, *Tishler, Stokes, Trenner, and Conn*,
1941, 141, 197

- Granulopenia:** Sulfaguanidine effect, *Azelrod, Gross, Bosse, and Swingle*, 1943, 148, 721
- Grasshopper:** Egg oil, protyrosinase activators, unimolecular films and fractions, *Allen, Boyd, and Bodine*, 1942, 143, 785
- Growth:** *Acetobacter suboxydans*, *p*-aminobenzoic acid effect, *Lampen, Underkofler, and Peterson*, 1942, 146, 277
- l*(+)-Amino-N-monomethyltryptophane and *dl*-amino-N-monomethyltryptophane availability, *Gordon*, 1939, 129, 309
- Aspartic acid effect, *Rose and Fierke*, 1942, 143, 115
- Bacterium dysenteriae* and microorganisms, asparagine-glutamate effect, *Bovarnick*, 1943, 148, 151
- Benzpyrene effect, *White and White*, 1939, 131, 149
- Betaine effect, chick, *Almquist and Grau*, 1943, 149, 575
- Biotin and succinylsulfathiazole, effect, *Nielsen and Elvehjem*, 1942, 145, 713
- Brain lipids, deposition and metabolism, effect, *Waelsh, Sperry, and Stoyanoff*, 1941, 140, 885
- Calcification, protein intake relation, *Conner, Kao, and Sherman*, 1941, 139, 835
- Casein and casein digest effect, *Mueller, Kemmerer, Cox, and Barnes*, 1940, 134, 573
- Casein-low diet, bromobenzene and naphthalene relation, *Stekol*, 1939, 127, 131
- Cystine effect, *Womack and Rose*, 1941, 141, 375
- N-(α, γ -Dihydroxy- β, β -dimethylbutyryl)taurine effect, *Snell*, 1941, 141, 121
- α -N-Dimethyllysine availability, *Gordon*, 1939, 127, 487
- Escherichia coli*, atabrine, spermidine, and polyamines, effect, *Silverman, and Evans*, 1943, 150, 265
- Growth—continued:**
- Factor, bacteria, *Woolley, McDaniel, and Peterson*, 1939, 131, 381
- Hutchings, Bohonos, and Peterson*, 1941, 141, 521
- , cartilage, chick, *Hegsted, Hier, Elvehjem, and Hart*, 1941, 139, 863
- , —, nutrition, chick, *Hegsted, Oleson, Elvehjem, and Hart*, 1939, 130, 423
- , *Clostridia*, *Woolley, McDaniel, and Peterson*, 1939, 131, 381
- , *Colpidium campyllum*, *Peterson*, 1942, 146, 537
- , lactic acid bacteria, purification and properties, *Hutchings, Bohonos, and Peterson*, 1941, 141, 521
- , *Lactobacillus casei*, *Clarke, Lechicka, and Light*, 1942, 142, 957
- Pollack and Lindner*, 1943, 147, 183
- , —, chick nutrition, relation, *Hutchings, Bohonos, Hegsted, Elvehjem, and Peterson*, 1941, 140, 681
- , —, isolation, *Stokstad*, 1941, 139, 475
- , —, properties, *Stokstad*, 1943, 149, 573
- Folic acid and succinylsulfathiazole, effect, *Nielsen and Elvehjem*, 1942, 145, 713
- Glucosamine effect, *Rose and Fierke*, 1942, 143, 115
- Glutathione relation, *Stekol*, 1939, 127, 131
- Histidine utilization, optical isomerism influence, *Totter and Berg*, 1939, 127, 375
- Hormone, pituitary, anterior, purification, *Marx, Simpson, and Evans*, 1943, 147, 77
- Iodoacetic acid effect, *Stevenson and White*, 1940, 134, 709
- Lactic acid bacteria, glutamine and glutamic acid effect, *Pollack and Lindner*, 1942, 143, 655
- , —, manganese relation, *Woolley*, 1941, 140, 311

Growth—continued:

- Lysine utilization, optical isomerism influence, *Totter and Berg*, 1939, 127, 375
- Mesolanthionine effect, cystine-deficient diet, *Jones, Divine, and Horn*, 1942, 146, 571
- Metabolism, *Rhizobium*, *Hoover and Allison*, 1940, 134, 181
- Methionine effect, *Womack and Rose*, 1941, 141, 375
- Methylcholanthrene effect, *White and White*, 1939, 131, 149
- N-Methyltryptophane, acetyl, effect, *Gordon, Cahill, and Jackson*, 1939, 131, 189
- α -N-Monomethyllysine availability, *Gordon*, 1939, 127, 487
- Muscle, retardation effect, *Lowry, McCay, Hastings, and Brown*, 1942, 143, 281
- Nicotinamide effect, *Handler and Dann*, 1942, 146, 357
- Nutrition effect, *Lanford, Campbell, and Sherman*, 1941, 137, 627
- Pantothenic acid effect, *Snell*, 1941, 139, 975
1941, 141, 121
- Phosphorus-deficient diet, effect, *Day and McCollum*, 1939, 130, 269
- Pyrene effect, *White and White*, 1939, 131, 149
- Substance, plant, tryptophane conversion, alkalinity effect, *Gordon and Wildman*, 1943, 147, 389
- Succinylsulfathiazole and folic acid and biotin, effect, *Nielsen and Elvehjem*, 1942, 145, 713
- Sulfaguanidine effect, *Black, Overman, Elvehjem, and Link*, 1942, 145, 137
- Sulfur-containing compounds, utilization, *Rose and Rice*, 1939, 130, 305
- Tryptophane utilization, optical isomerism influence, *Totter and Berg*, 1939, 127, 375
- l(-)-Tryptophane availability, *Gordon*, 1939, 129, 309

Growth—continued:

- Yeast extract supplement, effect, *Jukes*, 1940, 133, 631
- See also Rice factor
- Guanidine salt(s): Egg albumin, effect, *Greenstein*, 1939, 130, 519
- Guanidinuria: *Greenblatt*, 1941, 137, 791
- Guanidoacetic acid: Dietary, liver lipids, effect, *Stetten and Grail*, 1942, 144, 175
- Guanine: Determination, *Hitchings*, 1941, 139, 843
- Guinea pig: Dietary essentials, *Woolley*, 1942, 143, 679
- Gulonic acid: 2-Keto-l-, antiscorbutic properties, *Ball*, 1940, 134, 177

H

- Hagfish: Slime, protein, fibrous, *Ferry*, 1941, 138, 263
- Hair: Amino acids, *Block*, 1939, 128, 181
- Lanthionine isolation, *Horn and Jones*, 1941, 139, 473
- See also Achromotrichia, Alopecia
- Hardwood: Hemicelluloses, origin and composition, *Anderson, Seeley, Stewart, Redd, and Westerbeke*, 1940, 135, 189
- Heart: Alkalosis effect, *Yannet*, 1940, 136, 265
- Creatine and collagen, *Alburn and Myers*, 1939, 131, 713
- α -Ketoglutaric dehydrogenase, *Ochoa*, 1943, 149, 577
- Phospholipid, serologically active, isolation and purification, *Pangborn*, 1942, 143, 247
- Phosphorus, *Alburn and Myers*, 1939, 131, 713
- Ventricle electrolytes, *Wood*, 1942, 143, 165
- See also Muscle
- Hematopoietic activity: Bone marrow, copper, relation, *Schultze*, 1941, 138, 219
- Hematoporphyrin(s): Iron, nitrogenous bases, coordination, *Davies*, 1940, 135, 597

- Heme(s):** -Globin linkage, hemoglobin, *Ross*, 1939, 127, 169, 179
Ross and Turner, 1941, 139, 603
 Hemoglobin and derivatives, acid groups, structure, *Coryell and Pauling*, 1940, 132, 769
 Pigments, feces, urine, and blood plasma, determination, *Flink and Watson*, 1942, 146, 171
Hemic acid: Ferri-, solubility and titration, *Morrison and Williams*, 1941, 137, 461
Hemicellulose(s): Cottonseed hulls, *Anderson, Hechtman, and Seeley*, 1938, 126, 175
 Cottonwood, *Anderson, Kaster, and Seeley*, 1942, 144, 767
 Forage plants, *Bennett*, 1942, 146, 407
 Hardwood, origin and composition, *Anderson, Seeley, Stewart, Redd, and Westerbeke*, 1940, 135, 189
 Polyuronide, white pine, *Anderson, Kesselman, and Bennett*, 1941, 140, 563
Hemin: Catalase inhibition, effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
 Derivatives, spectrophotometric constants, *Drabkin*, 1941, 140, 373
 Destruction, fatty acids, unsaturated, and oxygen, effect, *Haurowitz, Schwerin, and Yenson*, 1941, 140, 353
 Iron determination, micro-, *Drabkin*, 1941, 140, 387
 Non-, iron, determination, *Brückmann and Zondek*, 1940, 135, 23
 Solubility and titration, *Morrison and Williams*, 1941, 137, 461
Spirographis, oxidation-reduction potentials, *Barron*, 1940, 133, 51
Hemochromogen(s): *Spirographis*, oxidation-reduction potentials, *Barron*, 1940, 133, 51
Hemocyanin: Blood serum, arthropods, *Allison and Cole*, 1940, 135, 259
 -Containing marine organisms, iron-porphyrin compounds, *Ball and Meyerhof*, 1940, 134, 483
Hemocyanin—continued:
 -Containing marine organisms, succinic dehydrogenase, *Ball and Meyerhof*, 1940, 134, 483
Limulus polyphemus, osmotic pressure, molecular weight, and dissociation, *Burk*, 1940, 133, 511
Hemoglobin(s): Absorption spectrum, *Horecker*, 1943, 148, 173
 Blood cell, red, density and, relation, *Ponder*, 1942, 144, 333
 — —, iron, radioactive, *Miller and Hahn*, 1940, 134, 585
 —, diurnal variations, *McCarthy and Van Slyke*, 1939, 128, 567
 — plasma, determination, *Flink and Watson*, 1942, 146, 171
 Carbon monoxide, analysis, *Ross and Turner*, 1941, 139, 603
 — — derivatives, chemical constitution, *Drabkin*, 1942, 146, 605
 Cephalin and, reaction, *Chargaff, Ziff, and Hogg*, 1939, 131, 35
 Crystalline, iron, *Bernhart and Skeggs*, 1943, 147, 19
 Cyanide derivatives, chemical constitution, *Drabkin*, 1942, 146, 605
 Derivatives, absorption spectrum, *Horecker*, 1943, 148, 173
 —, heme acid groups, structure, *Coryell and Pauling*, 1940, 132, 769
 Destruction, fatty acids, unsaturated, and oxygen, effect, *Haurowitz, Schwerin, and Yenson*, 1941, 140, 353
 Determination, hematin methods, errors, *Ponder*, 1942, 144, 339
 Dried, oxygen uptake, *Hisey and Morrison*, 1939, 130, 763
 Feces, determination, *Flink and Watson*, 1942, 146, 171
 Heat of oxygenation, *Wyman*, 1939, 127, 581
 Heme acid groups, structure, *Coryell and Pauling*, 1940, 132, 769
 Heme-globin linkage, *Ross*, 1939, 127, 169, 179
Ross and Turner, 1941, 139, 603
 Histidine, *Vickery*, 1942, 144, 719

Hemoglobin(s)—continued:

- Inactive, blood, *Ammundsen*,
1941, 138, 563
- Iron, ferritin iron, conversion, biological, *Hahn, Granick, Bale, and Michaelis*,
1943, 150, 407
- Methemoglobin-, system, oxidation-reduction potentials, *Taylor and Hastings*,
1939, 131, 649
- , —, urea solution, oxidation-reduction potentials, *Taylor*,
1942, 144, 7
- Oxygen equilibrium, *Altschul and Hogness*,
1939, 129, 315
- Oxygen-, equilibrium, urea solution, *Taylor and Hastings*,
1942, 144, 1
- Pancreatic digestion, *Ross and Turner*,
1941, 139, 603
- Preparation and properties, *Altschul, Sidwell, and Hogness*,
1939, 127, 123
- Production, vitamin D effect, *Fuhr and Steenbock*,
1943, 147, 65
- Protoporphyrin IX from, purification, *Grinstein and Watson*,
1943, 147, 667
- Pseudo-, blood cells, red, differentiation by, *Barkan and Walker*,
1940, 135, 803
- , iron, determination, *o*-phenanthroline use, *Barkan and Walker*,
1940, 135, 37
- Pyridine derivatives, chemical constitution, *Drabkin*,
1942, 146, 605
- Reactions, *Wyman and Ingalls*,
1941, 139, 877
- Synthesis, pyrrole-containing pigments, relation, *Kohler, Elvehjem, and Hart*,
1939, 128, 501
- Tissue extracts and solutions, turbid, determination, *Cohn*, 1943, 148, 219
- Urine, determination, *Flink and Watson*,
1942, 146, 171
- See also Carboxyhemoglobin, Methemoglobin, Oxyhemoglobin, Sulfhemoglobin

Hemophilus influenzae: Factor V determination, use in, *Hoagland and Ward*,
1942, 146, 115

- Hemophilus parainfluenzae:** *l*(-)-Aspartic and *l*(+)-glutamic acid oxidation, *Klein*,
1940, 134, 43
- Nicotinamide-containing nitrilites, effect, *Schlenk and Gingrich*,
1942, 143, 295
- Hemorrhage:** Anemia, *McKibbin, Schaefer, Elvehjem, and Hart*,
1942, 145, 107
- Anti-, activity, 2-methyl-1, 4-naphthoquinone, *Almquist and Klose*,
1939, 130, 787
- , compounds, preparation, *Fieser*,
1940, 133, 391
- , vitamin K₁ and 2-methyl-1, 4-naphthoquinone, comparison, *Emmett, Brown, and Kamm*, 1940, 132, 467
- Cholesterol effect, *Griffith*,
1940, 132, 639
- Choline, cystine, and methionine, interrelationship, *Griffith and Wade*,
1940, 132, 627
- Choline-low diet effect, *Griffith and Wade*,
1939, 131, 567
- Concentrates, sweet clover, determination, blood plasma prothrombin use in, *Campbell, Smith, Roberts, and Link*,
1941, 138, 1
- , —, —, preparation, *Campbell, Roberts, Smith, and Link*,
1940, 136, 47
- Cystine and fat effect, *Griffith*,
1940, 132, 639
- Kidney, choline effect, *Patterson and McHenry*,
1942, 145, 207
- Shock, tissue metabolism, effect, *Beecher and Craig*, 1943, 148, 383
- Sweet clover, agent, isolation and crystallization, *Campbell and Link*,
1941, 138, 21
- , —, —, synthesis, *Stahmann, Huebner, and Link*, 1941, 138, 513
- Huebner and Link*, 1941, 138, 529
- , —, disease, *Campbell, Roberts, Smith, and Link*, 1940, 136, 47
- Campbell, Smith, Roberts, and Link*,
1941, 138, 1
- Campbell and Link*, 1941, 138, 21
- Stahmann, Huebner, and Link*,
1941, 138, 513

Hemorrhage—continued:

- Sweet clover disease, *Huebner and Link*, 1941, 138, 529
Overman, Stahmann, Sullivan, Huebner, Campbell, and Link, 1942, 142, 941
Overman, Stahmann, and Link, 1942, 145, 155
Baumann, Field, Overman, and Link, 1942, 146, 7
Link, Overman, Sullivan, Huebner, and Scheel, 1943, 147, 463
- Heparin:** Barium salt, active, preparation and fractionation, *Kuizenga and Spaulding*, 1943, 148, 641
 Blood coagulation, action, *Ziff and Chargaff*, 1940, 136, 689
 Complement, blood plasma, electrophoresis study, *Chargaff, Ziff, and Moore*, 1941, 139, 383
 Mammals, *Jaques, Waters, and Charles*, 1942, 144, 229
 Thromboplastic factor and, reaction, *Chargaff, Ziff, and Cohen*, 1940, 136, 257
- Heparinase:** *Jaques*, 1940, 133, 445
- Hepatectomy:** Phospholipid formation site, radioactive phosphorus in study, *Fishler, Entenman, Montgomery, and Chaikoff*, 1943, 150, 47
- Heptanoic acid:** 2-Methyl-, 4-methylnonanoic acid, configurational relationship, *Levene and Kuna*, 1941, 140, 255
- Hetasine:** *Aconitum heterophyllum*, isolation, *Jacobs and Craig*, 1942, 143, 605
- Heteratisine:** *Aconitum heterophyllum*, *Jacobs and Craig*, 1942, 143, 605
 Benzoyl, *Aconitum heterophyllum*, *Jacobs and Craig*, 1943, 147, 571
- Hexitol(s):** Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231
 Metabolism, *Johnston and Deuel*, 1943, 149, 117
 O-Methylated, partially, *Levene and Kuna*, 1939, 127, 49
Tipson and Levene, 1939, 129, 575
 1939, 130, 235

Hexokinase: System, activator, *Colowick and Kalckar*, 1941, 137, 789

Hexosamine(s): Methylation, *Levene*, 1941, 137, 29

Uncombined, pineapple plants, ammonium sulfate or calcium nitrate effect, *Sideris, Young, and Krauss*, 1938, 126, 233

Hexose(s): Brain phospholipid formation *in vitro*, radioactive phosphorus in study, effect, *Schachner, Fries, and Chaikoff*, 1942, 146, 95

Glycoproteins, identification and determination, carbazole method, *Gurin and Hood*, 1939, 131, 211

Phosphorylation, enzyme, adenylyl pyrophosphate rôle, *Colowick and Kalckar*, 1943, 148, 117

Polysaccharides, identification and determination, carbazole method, *Gurin and Hood*, 1939, 131, 211

Hexosediphosphatase: *Gomori*, 1943, 148, 139

Hexose diphosphate: Preparation, *DuBois and Potter*, 1943, 147, 41

Hexose monophosphate: Preparation, *DuBois and Potter*, 1943, 147, 41

Hexuronic acid: Benzimidazole derivative, identification, *Lohmar, Dimler, Moore, and Link*, 1942, 143, 551

Hippuric acid: Formation, nitrogen isotope use, *Rittenberg and Schoenheimer*, 1939, 127, 329

Ring-substituted derivatives, hippuricase action, *Ellis and Walker*, 1942, 142, 291

Synthesis, betaine availability, *Abbott and Lewis*, 1939, 131, 479

—, biological, *in vitro*, *Borsook and Dubnoff*, 1940, 132, 307

—, N,N-dimethylglycine availability, *Abbott and Lewis*, 1939, 131, 479

—, N-ethylglycine and glycolic acid availability, *Abbott and Lewis*, 1941, 137, 535

—, formylglycine, acetylglycine, and propionylglycine effect, *Abbott*, 1942, 145, 241

Hippuric acid—continued:

Synthesis, N-methylglycine availability, *Abbott and Lewis*,

1939, 131, 479

Hippuricase: Hippuric acid ring-substituted derivatives, action, *Ellis and Walker*,

1942, 142, 291

Histaminase: Diamine deamination, oxidative, effect, *Stephenson*,

1943, 149, 169

Histamine-, reaction, oxygen consumption, *Laskowski*,

1942, 145, 457

Histamine: Enzymes, proteolytic, and, *Rocha e Silva and Andrade*,

1943, 149, 9

-Histaminase reaction, oxygen consumption, *Laskowski*,

1942, 145, 457

Liberation, papain effect, *Rocha e Silva and Andrade*,

1943, 149, 9

Histidine: α -Amino group activity, animals, *Schoenheimer, Rittenberg, and Keston*,

1939, 127, 385

γ -Aminobutyryl-*L*-, synthesis, *Hunt and du Vigneaud*,

1939, 127, 43

Aspartyl-, *Greenstein and Klempner*,

1939, 128, 245

Creatine and creatinine excretion, ingestion effect, *Hyde*,

1940, 134, 95

d(+)-, liver glycogen, effect, *Featherstone and Berg*,

1942, 146, 131

Determination, *Block*,

1940, 133, 67

Glycyl-*L*-, synthesis, *Hunt and du Vigneaud*,

1939, 127, 43

Hemoglobin, *Vickery*,

1942, 144, 719

l(-)-, liver glycogen, effect, *Featherstone and Berg*,

1942, 146, 131

—, metabolism, *Remmert and Butts*,

1942, 144, 41

—, physical properties, *Dunn, Frieden, Stoddard, and Brown*,

1942, 144, 487

Metabolism, intermediary, urocanic acid, relation, *Darby and Lewis*,

1942, 146, 225

Phosphorus, inorganic, excretion, ingestion effect, *Hyde*,

1940, 134, 95

Histidine—continued:

Preparation, 3,4-dichlorobenzenesulfonic acid use, *Vickery*,

1942, 143, 77

Urine, determination, *Langley*,

1941, 137, 255

—, pregnancy, *Langley*,

1941, 137, 255

Utilization, growth, optical isomerism influence, *Totter and Berg*,

1939, 127, 375

Homocysteine: S-(β -Amino- β -carboxyethyl)-, synthesis, *Brown and du Vigneaud*,

1941, 137, 611

U-S-(β -Amino- β -carboxyethyl)-, cysteine formation, liver, *Binkley, Anslow, and du Vigneaud*,

1942, 143, 559

—, diet, cystine replacement, effect, *du Vigneaud, Brown, and Chandler*,

1942, 143, 59

—, synthesis, *du Vigneaud, Brown, and Chandler*,

1942, 143, 59

d-, benzyl derivatives, optical inversion *in vivo*, *du Vigneaud, Wood, and Irish*,

1939, 129, 171

Dietary, liver lipids, effect, *Stetten and Grail*,

1942, 144, 175

Liver cysteine formation from, *Binkley and du Vigneaud*,

1942, 144, 507

Taurocholic acid production, effect, *Virtue and Doster-Virtue*,

1939, 128, 665

Thiolactone, ring opening, *du Vigneaud, Patterson, and Hunt*,

1938, 125, 217

Urine cystine, cystinuria, effect, *Hess and Sullivan*,

1943, 149, 543

Homocystine: Choline and, relation, *Welch*,

1941, 137, 173

Metabolism, cystinuria, *Lough, Perilstein, Heinen, and Carter*,

1941, 139, 487

Methionine replacement by, choline and betaine effect, comparison, *Chandler and du Vigneaud*,

1940, 135, 223

— — —, — effect, *du Vigneaud, Chandler, Moyer, and Keppel*,

1939, 131, 57

Homocystine—continued:

Methionine replacement by, vitamin B complex supplement, relation, *du Vigneaud, Dyer, and Kies*,

1939, 130, 325

Urine cystine, cystinuria, effect, *Hess and Sullivan*,

1943, 149, 543

Homogentisic acid: Excretion, vitamin C deficiency effect, *Sealock and Silberstein*,

1940, 135, 251

Hormone(s): A, *Achlya bisexualis*, *Raper and Haagen-Smit*,

1942, 143, 311

Steroid, metabolism, *Fish and Dorfman*,

1941, 140, 83

Fish, Dorfman, and Young,

1942, 143, 715

See also Sex, hormones

Horn: Amino acids, *Block*,

1939, 128, 181

Hura crepitans: Protease, *Jaffé*,

1943, 149, 1

Hurain: *Jaffé*,

1943, 149, 1

Hyaluronic acid: Pleural fluid, tumor, malignant, relation, *Meyer and Chaffee*,

1940, 133, 83

Hydration: Body water and electrolytes, distribution, nephrectomy effect, *Chanutin and Ludewig*,

1939, 131, 519

Hydrocarbon(s): Branched chain, monolayers, *Stenhagen and Stållberg*,

1941, 139, 345

Stållberg and Stenhagen,

1942, 143, 171

Stållberg-Stenhagen and Stenhagen,

1943, 148, 685

Cevine dehydrogenation, nature, *Craig, Jacobs, and Lavin*,

1941, 139, 277

Hydrogen: Isotope, *d*-phenylaminobutyric acid inversion and *l*-phenylaminobutyric acid acetylation, use in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*,

1939, 131, 273

Nitrogen fixation, symbiotic, effect, *Wilson, Lee, and Wyss*,

1941, 139, 91

Hydrogen—continued:

Tissue transport mechanism, *Potter*,

1940, 134, 417

Lockhart and Potter,

1941, 137, 1

Potter,

1941, 137, 13

1941, 141, 775

Potter and Schneider,

1942, 142, 543

Water and, exchange reaction, biological catalysis, *Hoberman and Rittenberg*,

1943, 147, 211

Hydrogenase: *Azotobacter* extracts, *Lee, Wilson, and Wilson*,

1942, 144, 273

—, properties, *Wilson, Lee, and Wilson*,

1942, 144, 265

Nitrogen fixation, symbiotic, and, *Wilson, Burris, and Coffee*,

1943, 147, 475

Hydrogen ion concentration: Blood, carbohydrate storage and mobilization, effect, *Guest and Rawson*,

1941, 139, 535

— cell, red, determination, spectrophotometric, *Drabkin and Singer*,

1939, 129, 739

Intestine, calcium and phosphorus utilization, relation, *Jones*,

1942, 142, 557

—, factors affecting, *Robinson, Luckey, and Mills*,

1943, 147, 175

Lactobacillus casei growth, vitamin determination, *Silber and Mushett*,

1942, 146, 271

Hydrogen peroxide: Bacterial cultures, determination, *Main and Shinn*,

1939, 128, 417

Casein nutrition rôle, effect, *Bennett and Toennies*,

1942, 145, 671

Estrone oxidation by, *Westerfeld*,

1942, 143, 177

Methionine determination, use, *Toennies and Callan*,

1939, 129, 481

Peroxidase-, complex, *Abrams, Altschul, and Hogness*,

1942, 142, 303

Hydrogen sulfide: Production, liver cysteine and cystine utilization, relation, *Smythe*,

1942, 142, 387

Radioactive sulfur-containing, *Tarver and Schmidt*,

1942, 146, 69

- Hydrolecithin:** -Containing cerebroside, *Cysticercus* larvae, *Lesuk and Anderson*, 1941, 139, 457
- Hydronephrosis:** Muscle water and electrolytes, effect, *Eichelberger*, 1941, 140, 467
- Water and electrolytes, *Eichelberger and Bibler*, 1940, 132, 645
- Hydroxyamino acid(s):** O-Acetyl derivatives, preparation, *Sakami and Toennies*, 1942, 144, 203
- Activity, aqueous solution, *Smith and Smith*, 1940, 132, 57
- Ionization, aqueous solution, *Smith, Gorham, and Smith*, 1942, 144, 737
- Methylation, betaine formation, *Dakin*, 1941, 140, 847
- Silk proteins, *Nicolet and Saidel*, 1941, 139, 477
- Hydroxyapatite:** Fluoride adsorption, radioactive isotope in study, *Volker, Hodge, Wilson, and Van Voorhis*, 1940, 134, 543
- Phosphate adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*, 1941, 138, 451
- Sodium adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*, 1943, 148, 321
- Hydroxy- γ -benzylthiobutyric acid:** *dl*- α -, metabolism, *Stekol*, 1941, 140, 827
- Hydroxy- β -benzylthiopropionic acid:** *l*- and *dl*- α -, metabolism, *Stekol*, 1941, 140, 827
- Hydroxybutyric acid:** β -, acetoacetic acid and, blood and urine, glucose effect, *Stark and Somogyi*, 1943, 147, 721
- , — —, blood and urine, insulin effect, *Stark and Somogyi*, 1943, 147, 731
- , — —, blood and urine, relationship, *Stark and Somogyi*, 1943, 147, 319
- , — —, ratio, blood and urine, Primates, *Friedemann*, 1942, 142, 635
- Hydroxybutyric acid—continued:**
- β -, concentration and utilization rate, relation, *Nelson, Grayman, and Mirsky*, 1941, 140, 361
- , determination, *Blunden, Hallman, Morehouse, and Deuel*, 1940, 135, 757
- , disappearance rate, *Deuel, Hallman, Greeley, Butts, and Halliday*, 1940, 133, 173
- , mammary gland, lactating, utilization, *Shaw and Knodt*, 1941, 138, 287
- Shaw and Petersen*, 1943, 147, 639
- , utilization, concentration effect, *Wick and Drury*, 1941, 138, 129
- Hydroxycholesterol:** 7(β)-, blood serum, pregnancy, isolation, *Wintersteiner and Ritzmann*, 1940, 136, 697
- , Δ^6 -cholestenediol-3(β), 5, relation, *Bergström and Wintersteiner*, 1942, 143, 503
- Hydroxyestrone:** 7-, *Pearlman and Wintersteiner*, 1939, 130, 35
- , Δ^6 -isoequilin from, *Pearlman and Wintersteiner*, 1940, 132, 605
- Hydroxyglutamic acid:** Milk proteins, *Nicolet and Shinn*, 1942, 142, 139
- Hydroxy group(s):** Amino acids, acetylation, *Sakami and Toennies*, 1942, 144, 203
- —, determination, *Toennies and Kolb*, 1942, 144, 219
- Hydroxy-3-(4'-hydroxyphenyl) chroman:** 7-, equol, identity, *Anderson and Marrian*, 1939, 127, 649
- Hydroxylamine:** Catalase inhibition, effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
- Hydroxylaminobenzenesulfonamide:** *p*-, catalase inhibition, effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
- Hydroxylysine:** *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 1940, 133, 287
- Dissociation constants, *Klemperer, Hastings, and Van Slyke*, 1942, 143, 433

Hydroxylysine—continued:

Proteins, determination, *Van Slyke, Hiller, and MacFadyen*,

1941, 141, 681

Hydroxyprogesterone: 17-, adrenals, isolation, *Pfiffner and North*,

1941, 139, 855

17- β -, *Pfiffner and North*,

1940, 132, 459

Hydroxy- Δ^5 -steroid(s): 3-, determination, polarographic, *Hershberg, Wolfe, and Fieser*,

1941, 140, 215

Hypaphorine: Derivatives, properties, *Cahill and Jackson*,

1938, 126, 627

Ester, racemization, *Cahill and Jackson*,

1938, 126, 627

Hypertension: Renal, blood pressure reduction, kidney extracts, effect, *Grollman, Williams, and Harrison*,

1940, 134, 115

Hyperthyroidism: Tissue coenzyme I, *Kutzenelbogen, Axelrod, and Elvehjem*,

1941, 141, 611

Hypervitaminosis: D₂ and D₃, dietary calcium, phosphorus, and vitamin A effect, *Morgan, Shimotori, and Hendricks*,

1940, 134, 761

Hypoglycemia: Insulin, pituitary adrenocorticotrophic hormone and adrenal cortex principles, effect, *Grattan and Jensen*,

1940, 135, 511

—, tissue lipids, effect, *Randall*,

1940, 133, 129

Hypophysectomy: Blood serum inorganic phosphate and alkaline phosphatase, effect, *Jones and Shinowara*,

1942, 142, 935

Hypoproteinemia: Blood plasma amino acid retention, liver function, relation, *Goettsch, Lyttle, Grim, and Dunbar*,

1942, 144, 121

Hypoprothrombinemia: Salicylic acid effect, *Link, Overman, Sullivan, Huebner, and Scheel*,

1943, 147, 463

Vitamin C excretion and, 3,3'-methyl-enebis(4-hydroxycoumarin) effect, *Baumann, Field, Overman, and Link*,

1942, 146, 7

Hypoxanthine: Determination, *Hitchings*,

1942, 143, 43

Hysterectomy: Ovariectomy-, α -estradiol conversion to estrone and β -estradiol, effect, *Fish and Dorfman*,

1942, 143, 15

I

Iminazole ring(s): Ascorbic acid effect, *in vivo*, *Greenblatt and Pecker*,

1940, 134, 341

Immunity: Antibody protein, nitrogen, dietary, effect, *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*,

1942, 144, 555

Indole: Dimethyl-, dihydrolysergic acid derivative, *Jacobs and Craig*,

1939, 128, 715

Trimethylene-, derivatives, preparation, *Gould and Jacobs*,

1939, 130, 407

Indolelactic acid: 3-, liver glycogen and urine kynurenic acid, kynurenine, and acetone bodies, effect, *Borchers, Berg, and Whitman*,

1942, 145, 657

Indolepyruvic acid: 3-, liver glycogen and urine kynurenic acid, kynurenine, and acetone bodies, effect, *Borchers, Berg, and Whitman*,

1942, 145, 657

Inheritance: Muscle phospholipid and cholesterol, exercise and, effect, *Bloor*,

1940, 132, 77

Inorganic component(s): Blood cell, red, *Solomon, Hald, and Peters*,

1940, 132, 723

Inorganic salt(s): Phosphatides and, *Christensen and Hastings*,

1940, 136, 387

Inositol: Brain phosphatide, *Folch and Woolley*,

1942, 142, 963

-Containing phospholipid, soy bean, isolation and chemical constitution, *Woolley*,

1943, 147, 581

Determination, *Woolley*,

1941, 140, 453

Lipotropic factor, *Gavin and McHenry*,

1941, 139, 485

Gavin, Patterson, and McHenry,

1943, 148, 275

Phosphatide, brain cephalin, separation, *Folch*,

1942, 146, 35

Inositol—continued:

Specificity, biological, *Woolley*,
1941, 140, 461

Insulin: Ammonolyzed, reactions,
Roberts, 1939, 128, 597

Azo derivatives, *Reiner and Lang*,
1941, 139, 641

Blood β -hydroxybutyric acid and
acetoacetic acid, effect, *Stark and*
Somogyi, 1943, 147, 731

— lactate, diabetes, effect, *Klein*,
1942, 145, 35

— lipids, pancreatectomy and duct
ligation, pancreatic juice ingestion
with, effect, *Entenman, Chaikoff,*
and Montgomery, 1941, 137, 699

— pyruvate, diabetes, effect, *Klein*,
1942, 145, 35

Crystalline, zinc-low, *Sahyun*,
1941, 138, 487

Cystine, acid sensitivity, *Sullivan and*
Hess, 1939, 130, 745

—, determination, colorimetric and
polarographic, *Sullivan, Hess, and*
Smith, 1939, 130, 741

Digests, plastein synthesis, trypsin
and papain effect, *Haddock and*
Thomas, 1942, 144, 691

Duponol solution, ultracentrifuge and
diffusion studies, *Miller and Anders-*
son, 1942, 144, 475

Electrophoresis, *Hall*, 1941, 139, 175
1941, 140, 671

Glycogen storage, diabetes, effect,
Pauls and Drury, 1942, 145, 481

Hypoglycemia, pituitary adrenocor-
ticotropic hormone and adrenal
cortex principles, effect, *Grattan*
and Jensen, 1940, 135, 511

—, tissue lipids, effect, *Randall*,
1940, 133, 129

Ketone body production, effect,
Somogyi, 1941, 141, 219

— metabolism, normal and diabetic
cats, *Stadie, Zapp, and Lukens*,
1940, 132, 423

Lanthionine, *du Vigneaud, Brown,*
and Bonsnes, 1941, 141, 707

Insulin—continued:

Liver carbohydrate synthesis, normal
and diabetic, effect, *Stadie, Lukens,*
and Zapp, 1940, 132, 393

— phosphorus, acid-soluble, distribu-
tion, effect, *Nelson, Rapoport, Guest,*
and Mirsky, 1942, 144, 291

— urea formation and liver respiration,
normal and diabetic, effect, *Stadie,*
Lukens, and Zapp, 1940, 132, 393

Livers, fatty, pancreatectomy and,
choline relation, *Entenman and*
Chaikoff, 1941, 138, 477

Methionine presence, *du Vigneaud,*
Miller, and Rodden, 1939, 131, 631

Molecular weight, *Miller and Anders-*
son, 1942, 144, 459

Muscle oxidations, effect, *Stadie, Zapp,*
and Lukens, 1940, 132, 411

— respiration, effect, *Stare and Bau-*
mann, 1940, 133, 453

Pyruvic acid formation, effect, pan-
createctomy and, *Bueding, Fazekas,*
Herrlich, and Himwich,
1943, 148, 97

Reduced, ultracentrifuge study, *Miller*
and Andersson, 1942, 144, 465

Urine β -hydroxybutyric acid and
acetoacetic acid, effect, *Stark and*
Somogyi, 1943, 147, 731

Interstitial cell-stimulating hormone:

Pituitary, purification, *Jensen,*
Tolksdorf, and Bamman,
1940, 135, 791

Intestine: Arginase, testosterone pro-
pionate effect, *Kochakian and Clark*,
1942, 143, 795

Calcium chloride and calcium lactate
solutions, changes, *Robinson,*
Stewart, and Luckey, 1941, 137, 283

Creatine and creatinine excretion,
nephrectomy effect, *Bodansky, Duff,*
and McKinney, 1941, 140, 365

Hydrogen ion concentration, calcium
and phosphorus utilization, relation,
Jones, 1942, 142, 557

— — —, factors affecting, *Robinson,*
Luckey, and Mills, 1943, 147, 175

Intestine—continued:

- Monosaccharides, absorption, mono-iodoacetic acid effect, *Klinghoffer*, 1938, 126, 201
- Mucosa dipeptidases, *Gailey and Johnson*, 1941, 141, 921
- , fatty acid absorption and transport, *Barnes, Miller, and Burr*, 1941, 140, 233
- , fructose, glucose and phlorhizin, effect, *Beck*, 1942, 143, 403
- , phosphate, organic, glucose and phlorhizin, effect, *Beck*, 1942, 143, 403
- , phosphates, glucose absorption, effect, *Eiler, Stockholm, and Althausen*, 1940, 134, 283
- Nucleophosphatase, tobacco mosaic virus, action, *Cohen and Stanley*, 1942, 142, 863
- Peptidases, manganese effect, *Smith and Bergmann*, 1941, 138, 789
- Phosphatase, *Schmidt and Thannhauser*, 1943, 149, 369
- Sodium chloride absorption, mono-iodoacetic acid effect, *Klinghoffer*, 1938, 126, 201
- See also Alimentary tract, Duodenum, Jejunum
- Inulin:** Blood, determination, colorimetric, *Alving, Rubin, and Miller*, 1939, 127, 609
- plasma, determination, colorimetric, *Steinitz*, 1938, 126, 589
- serum, determination, photometric, micro, *Ranney and McCune*, 1943, 150, 311
- Determination, *Hubbard and Loomis*, 1942, 145, 641
- , diphenylamine use, *Corcoran and Page*, 1939, 127, 601
- Urine, determination, colorimetric, *Steinitz*, 1938, 126, 589
- Alving, Rubin, and Miller*, 1939, 127, 609
- , —, photometric, micro, *Ranney and McCune*, 1943, 150, 311
- Invertase:** Activity, *Manchester*, 1939, 130, 439

- Invertebrate(s):** Tissue, autolysis, *Belfer, Koran, Eder, and Bradley*, 1943, 147, 345
- Iodate:** Determination, micro-, *Sendroy and Alving*, 1942, 142, 159
- Protein-free solutions, determination, micro-, *Sendroy*, 1939, 130, 605
- Iodide(s):** Blood cell, red, permeability, *Smith, Eisenman, and Winkler*, 1941, 141, 555
- , determination, colorimetric, *Flox, Pitesky, and Alving*, 1942, 142, 147
- Urine, determination, *Pearl*, 1943, 148, 85
- , —, colorimetric, *Flox, Pitesky, and Alving*, 1942, 142, 147
- Iodine:** Amino nitrogen determination, nitrous acid use, effect, *Dunn and Porush*, 1939, 127, 261
- Kendrick and Hanke*, 1940, 132, 739
- Biological materials, determination, micro-, *Shahrokh*, 1943, 147, 109
- Blood, *Riggs and Man*, 1940, 134, 193
- , birds, seasonal variation, *Clarke and Boyd*, 1940, 135, 691
- , determination, micro-, permanganate acid ashing method, *Riggs and Man*, 1940, 134, 193
- , fractionation, *Bruger and Member*, 1943, 148, 77
- , —, alcohol, *Boyd and Clarke*, 1942, 142, 619
- , nature, *Trevorrow*, 1939, 127, 737
- Riggs, Laviates, and Man*, 1942, 143, 363
- serum albumin addition to, thyroid effect, *Muus, Coons, and Salter*, 1941, 139, 135
- Creatinuria,** effect, *Gaebler and Bartlett*, 1939, 129, 559
- Determination, micro-, photoelectric, *Sendroy and Alving*, 1942, 142, 159
- Metabolism,** basal, effect, *Gaebler and Bartlett*, 1939, 129, 559
- , radioactive iodine as indicator, *Perlman, Chaikoff, and Morton*, 1941, 139, 433
- Perlman, Morton, and Chaikoff*, 1941, 139, 449

Iodine—continued:

- Metabolism, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*, 1941, 140, 603
Morton, Chaikoff, Reinhardt, and Anderson, 1943, 147, 757
- Nitrogen excretion effect, *Gaebler and Bartlett*, 1939, 129; 559
- Pituitary, *Baumann and Metzger*, 1939, 127, 111
- lactogenic hormone, reaction, *Li, Lyons, and Evans*, 1941, 139, 43
- Protein-free solutions, determination, micro-, *Sendroy*, 1939, 130, 605
- Proteins, thyroid activity, effect, *Reineke, Williamson, and Turner*, 1943, 147, 115
- Radioactive, thyroxine and diiodo-tyrosine formation *in vitro*, indicator, *Morton and Chaikoff*, 1943, 147, 1
- , — — — formation, thyroidectomy effect, indicator, *Morton, Chaikoff, Reinhardt, and Anderson*, 1943, 147, 757
- , — — — turnover, thyroid and blood plasma, thyrotropic hormone effect, indicator for, *Morton, Perlman, and Chaikoff*, 1941, 140, 603
- Thyroid, metabolism, *Mann, Leblond, and Warren*, 1942, 142, 905
- , turnover, radioactive iodine as indicator, *Perlman, Chaikoff, and Morton*, 1941, 139, 433
- Tissues, *Baumann and Metzger*, 1939, 127, 111
- , turnover, radioactive iodine as indicator, *Perlman, Chaikoff, and Morton*, 1941, 139, 433
- Iodoacetic acid: Carbohydrate metabolism, isolated tissues, effect, *Barker, Shorr, and Malam*, 1939, 129, 33
- Egg albumin, denatured, and, reaction, *Rosner*, 1940, 132, 657
- Growth effect, *Stevenson and White*, 1940, 134, 709
- Sulfur metabolism, influence, *Stevenson and White*, 1940, 134, 709

Iodobenzoate: Mono-, brain oxidation by,

- effect, *Bernheim and Bernheim*, 1941, 138, 501
- 2,3,5-Tri-, brain oxidation by, effect, *Bernheim and Bernheim*, 1941, 138, 501
- Iron: Availability, phytic acid effect, *Fuhr and Steenbock*, 1943, 147, 59
- Bile, distribution and excretion, radioactive isotopes in study, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- Blood, determination, micro-, *Breuer and Militzer*, 1938, 126, 561
- plasma, blood cell, red, as source, *Barkan and Walker*, 1939, 131, 447
- serum, determination, *o*-phenanthroline use, *Barkan and Walker*, 1940, 135, 37
- Body, vitamin D effect, *Fuhr and Steenbock*, 1943, 147, 65
- Coproporphyrin, nitrogenous bases, coordination, *Vestling*, 1940, 135, 623
- Cytochrome *c*, determination, micro-, *Drabkin*, 1941, 140, 387
- oxidase, tissue, effect, *Schultze*, 1939, 129, 729
- Determination, photometric, *Pereira*, 1941, 137, 417
- , spectrophotometric, *Koenig and Johnson*, 1942, 142, 233
- , —, 2,2'-bipyridine use, *Koenig and Johnson*, 1942, 143, 159
- , —, mercaptoacetic acid use, *Koenig and Johnson*, 1942, 142, 233
- Easily split, red blood cell hemoglobin, *Müller and Hahn*, 1940, 134, 585
- Etioporphyrin, nitrogenous bases, coordination, *Vestling*, 1940, 135, 623
- Ferritin, inorganic and hemoglobin iron, conversion relation, *Hahn, Granick, Bale, and Michaelis*, 1943, 150, 407
- , storage function, radioactive and magnetic measurements, *Hahn, Granick, Bale, and Michaelis*, 1943, 150, 407

Iron—continued:

- Hematoporphyrin, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- Hemin, determination, micro-, *Drabkin*, 1941, 140, 387
- Hemoglobin, crystalline, *Bernhart and Skeggs*, 1943, 147, 19
- , ferritin iron, conversion, biological, *Hahn, Granick, Bale, and Michaelis*, 1943, 150, 407
- Inorganic, ferritin iron, conversion, biological, *Hahn, Granick, Bale, and Michaelis*, 1943, 150, 407
- Mesoporphyrin, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- Metabolism, radioactive isotope in study, *Austoni and Greenberg*, 1940, 134, 27
- Non-hemin, determination, *Brückmann and Zondek*, 1940, 135, 23
- , spermatozoa, *Zittle and Zitin*, 1942, 144, 105
- Porphyrin compounds, marine organisms, *Ball and Meyerhof*, 1940, 134, 483
- Protoporphyrin, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- Pseudo-hemoglobin, determination, o-phenanthroline use, *Barkan and Walker*, 1940, 135, 37
- Radioactive, red blood cell hemoglobin, *Miller and Hahn*, 1940, 134, 585
- Tissue catalase, effect, *Schultze and Kuiken*, 1941, 137, 727
- Tissues, *Austoni, Rabinovitch, and Greenberg*, 1940, 134, 17
- Total, spermatozoa, *Zittle and Zitin*, 1942, 144, 105
- Utilization, calcium, phosphorus, and vitamin D effect, *Fuhr and Steenbock*, 1943, 147, 59, 65, 71
- Isoandrosterone: Urine, isolation, *Pearlman*, 1940, 136, 807
- Isoatisine: *Jacobs and Craig*, 1943, 147, 567
- Isocitric acid: Malic acid, crassulacean, identity, *Pucher and Vickery*, 1942, 145, 525

- Isoequilin: A, *Hirschmann and Wintersteiner*, 1938, 126, 737
- Δ^6 -, from 7-hydroxyestrone, *Pearlman and Wintersteiner*, 1940, 132, 605
- Isomannide: Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231
- Isomerase: Equilibrium, *Meyerhof and Junowicz-Kocholaty*, 1943, 149, 71
- Isorubijervine: *Jacobs and Craig*, 1943, 148, 41
- Isotope(s): Dilution, analysis by, *Rittenberg and Foster*, 1940, 133, 737
- d(+)-Leucine metabolism and inversion, study by, *Ratner, Schoenheimer, and Rittenberg*, 1940, 134, 653
- Protein metabolism indicators, *Schoenheimer and Rittenberg*, 1939, 127, 285
- Radioactive, iron, cobalt, and manganese distribution and excretion, bile, study with, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- , mineral metabolism indicator, *Joseph, Cohn, and Greenberg*, 1939, 128, 673
- Cohn and Greenberg*, 1939, 130, 625
- Greenberg, Campbell, and Murayama*, 1940, 136, 35
- Greenberg, Copp, and Cuthbertson*, 1943, 147, 749
- , organic material, determination, *Chargaff*, 1939, 128, 579
- Unstable, *Chargaff*, 1939, 128, 579, 587
- , lecithin and cephalin formation rate, indicator, *Chargaff*, 1939, 128, 587
- Isovaline: dl-, metabolism, *Butts and Sinnhuber*, 1941, 139, 963

J

- Jack bean: See Bean
- Jaundice: Obstructive, blood plasma phosphatase and blood phospholipids, effect, *Weil and Russell*, 1942, 144, 307
- Jejunum: Secretions, carbon dioxide tension and acid-base balance, *McGee and Hastings*, 1942, 142, 893

- Jervine:** Chemical constitution, *Jacobs and Craig*, 1943, 148, 51
 Dehydrogenation, *Jacobs, Craig, and Lavin*, 1941, 141, 51
 Isorubi-, *Jacobs and Craig*, 1943, 148, 41
 Rubi-, *Jacobs and Craig*, 1943, 148, 41
Jones-Dubos enzyme: *Schmidt and Levene*, 1938, 126, 423

K

- Keratin(s):** Amino acids, *Block and Bolling*, 1939, 127, 685
Block, 1939, 128, 181
 Eu-, amino acids, *Block*, 1939, 128, 181
Ketene: Amino acid racemization, acetylation with, *Jackson and Cahill*, 1938, 126, 87
Cahill and Burton, 1940, 132, 161
 Dipeptide racemization, acetylation with, *Cahill and Burton*, 1940, 132, 161
 Gonadotropic hormones, action, *Li, Simpson, and Evans*, 1939, 131, 259
 Parathyroid hormone acetylation, *Wood and Ross*, 1942, 146, 59
Keto acid(s): Blood, determination, *Friedemann and Haugen*, 1943, 147, 415
 Excretion, *Waelsch*, 1941, 140, 313
 —, amino acid metabolism, relation, *Waelsch and Miller*, 1942, 145, 1
 Urine, determination, *Friedemann and Haugen*, 1943, 147, 415
Keto- α -estradiol: 6-, *Longwell and Wintersteiner*, 1940, 133, 219
Ketoestrone: 7-, *Pearlman and Wintersteiner*, 1939, 130, 35
Ketogenesis: Anti-, citric acid relation, *MacKay, Carne, and Wick*, 1940, 133, 59
 —, glucose, glycine, and alanine, effect, *Wick, MacKay, Carne, and Mayfield*, 1940, 136, 237
 Liver, species difference, *Cohen and Stark*, 1938, 126, 97
Ketogenic action: Fatty acids, *MacKay, Wick, and Barnum*, 1940, 136, 503
 —, branched chain, *Wick*, 1941, 141, 897
Ketogenic activity: Acetic acid, *MacKay, Barnes, Carne, and Wick*, 1940, 135, 157
 Fatty acids, *MacKay, Wick, and Barnum*, 1940, 135, 183
Ketogenic substance(s): Pituitary, anterior, fractions, preparation and assay, *Greaves, Freiberg, and Johns*, 1940, 133, 243
Ketoglutarate: α -, metabolism, thiamine effect, *Barron, Goldinger, Lipton, and Lyman*, 1941, 141, 975
 —, synthesis, carbon dioxide utilization, *Evans and Slotin*, 1940, 136, 301
Ketoglutaric carboxylase: α -, tissue, *Green, Westerfeld, Vennesland, and Knox*, 1941, 140, 683
Ketoglutaric dehydrogenase: α -, heart, *Ochoa*, 1943, 149, 577
Keto-l-gulonic acid: 2-, antiscorbutic properties, *Ball*, 1940, 134, 177
Ketolysis: Liver, species difference, *Cohen and Stark*, 1938, 126, 97
Ketone(s): Glucose, sparing effect, *Somogyi and Weichselbaum*, 1942, 145, 567
 Metabolism, insulin effect, normal and diabetic cats, *Stadie, Zapp, and Lukens*, 1940, 132, 423
 Phenolic, urine, determination, colorimetric, *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 1940, 134, 319
 α,β -Unsaturated, adrenal, isolation, *Pfiffner and North*, 1941, 140, 161
Ketone bodies: Determination, micro-, *Weichselbaum and Somogyi*, 1941, 140, 5
 Liver fatty acid, diabetes, relation, *Stadie, Zapp, and Lukens*, 1941, 137, 75
 Production, insulin effect, *Somogyi*, 1941, 141, 219
 Tissues, *Harrison and Long*, 1940, 133, 209
 See also Acetone bodies

- Ketonemia:** Glucose ingestion effect, *Somogyi*, 1942, 145, 575
- Ketonuria:** Endogenous, *Deuel and Hallman*, 1941, 140, 545
- Ketosis:** *Morehouse*, 1939, 129, 769
Deuel, Hallman, Greeley, Butts, and Halliday, 1940, 133, 173
Blunden, Hallman, Morehouse, and Deuel, 1940, 135, 757
Deuel and Hallman, 1941, 140, 545
Bobbitt and Deuel, 1942, 143, 1
Johnston and Deuel, 1943, 149, 117
- Alkalosis and acidosis, effect,** *MacKay, Wick, Carne, and Barnum*, 1941, 138, 63
- Fasting, diet and liver fat, relation,** *MacKay, Carne, Wick, and Visscher*, 1941, 141, 889
- Mammary gland acetone body metabolism, effect,** *Shaw*, 1942, 142, 53
- Man and dog, comparison,** *Crandall*, 1941, 138, 123
- Primates,** *Friedemann*, 1942, 142, 635
- Ketosteroid(s):** 17-, determination, colorimetric, *Holtorf and Koch*, 1940, 135, 377
 —, neutral, urine, determination, colorimetric, correction equation, *Talbot, Berman, and MacLachlan*, 1942, 143, 211
 —, total, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan*, 1940, 132, 595
 —, urine, determination, colorimetric, *Holtorf and Koch*, 1940, 135, 377
 —, — extracts, chromatographic separation and determination, colorimetric, *Talbot, Wolfe, MacLachlan, and Berman*, 1941, 139, 521
 α -17- and β -17-, neutral, urine, hydrolysis, extraction, and determination, spectrochemical, *Talbot, Butler, MacLachlan, and Jones*, 1940, 136, 365
 — — —, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan*, 1940, 132, 595
- Carbonyl groups, determination, gravimetric,** *Hughes*, 1941, 140, 21
- Kidney:** Acetoacetate, carbohydrate synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- Amino acid oxidation, thyroid feeding and thyroidectomy effect,** *Klein*, 1939, 128, 659
- Arginase, testosterone propionate effect,** *Kochakian and Clark*, 1942, 143, 795
- Bile fistulae, protoporphyrin fate, relation,** *Watson, Pass, and Schwartz*, 1941, 139, 583
- Cathepsin,** *Fruton, Irving, and Bergmann*, 1941, 141, 763
- Citrulline conversion to arginine,** *Borsook and Dubnoff*, 1941, 141, 717
- Creatine formation,** *Borsook and Dubnoff*, 1940, 134, 635
- Electrolytes, normal and hydro-nephrotic,** *Eichelberger and Bibler*, 1940, 132, 645
- Enzyme distribution,** *Weil and Jennings*, 1941, 139, 421
- Enzymes, proteolytic,** *Fruton, Irving, and Bergmann*, 1941, 141, 763
- Extract, glucose phosphorylation, effect,** *Colowick, Welch, and Cori*, 1940, 133, 359
- Extracts, blood pressure reduction, renal hypertension, effect,** *Grollman, Williams, and Harrison*, 1940, 134, 115
- , cell-free, polyphenoloxidase properties, *Cadden and Dill*, 1942, 143, 105
- Glutamic acid formation, glutathione hydrolysis, enzymatic, hydrogen ion concentration effect,** *Woodward and Reinhart*, 1942, 145, 471
- Glyconeogenesis, adrenalectomy effect,** *Russell and Wilhelmi*, 1941, 140, 747
- Hemorrhage, choline effect,** *Patterson and McHenry*, 1942, 145, 207
- Impairment, muscle water, influence,** *Eichelberger*, 1939, 128, 137
- Laccase, nature,** *Baker and Nelson*, 1943, 147, 341

Kidney—continued:

- Metabolism, adrenalectomy effect,
Russell and Wilhelmi, 1941, 137, 713
- N-Methylamino acids, oxidation, *in vitro*, *Handler, Bernheim, and Klein*, 1941, 138, 203
- Nephritis, oxidations and carbohydrate synthesis, *Lyman and Barron*, 1940, 132, 293
- Phosphatase, aminoethyl phosphate and β -glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 1940, 132, 675
- Phosphatases, separation, *Perlmann and Ferry*, 1942, 142, 513
- Phospholipid formation *in vitro*, anaerobiosis and respiratory inhibitors, radioactive phosphorus as indicator, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281
- metabolism, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger*, 1940, 132, 219
- turnover, *Sinclair*, 1940, 134, 71
- Phosphorus, total, metabolism, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger*, 1940, 132, 219
- Pyrrolidonecarboxylic acid formation, glutathione hydrolysis, enzymatic, hydrogen ion concentration effect, *Woodward and Reinhart*, 1942, 145, 471
- Water, normal and hydronephrotic, *Eichelberger and Bibler*, 1940, 132, 645
- See also Hydronephrosis, Metanephros, Nephrectomy, Nephritis
- Kinase:** Hexo-, system, activator, *Colowick and Kalckar*, 1941, 137, 789
- Kjeldahl method:** Micro-, rapid, *Keys*, 1940, 132, 181
- Krebs cycle:** Carbon dioxide fixation mechanism, *Wood, Werkman, Hemingway, and Nier*, 1941, 139, 483
- Krogh:** Syringe, blood serum specific gravity determination, *Schousboe*, 1939, 129, 371

- Kynurenic acid:** Excretion, Carnivora, *Jackson*, 1939, 131, 469
- Urine, tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and l(-)-kynurenine effect, *Borchers, Berg, and Whitman*, 1942, 145, 657
- Kynurenine:** l(-)-, liver glycogen and urine kynurenic acid, kynurenine, and acetone bodies, effect, *Borchers, Berg, and Whitman*, 1942, 145, 657
- Urine, tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and l(-)-kynurenine effect, *Borchers, Berg, and Whitman*, 1942, 145, 657

L

- Laccase:** Kidney, nature, *Baker and Nelson*, 1943, 147, 341
- Lactalbumin:** Lanthionine isolation, *Horn and Jones*, 1941, 139, 473
- Lactate:** Blood composition, injection effect, *Bueding and Goldfarb*, 1943, 147, 33
- , diabetes, glucose and insulin effect, *Klein*, 1942, 145, 35
- Pyruvate, blood, relation, thiamine deficiency, *Stotz and Bessey*, 1942, 143, 625
- Lactation:** Mammary gland, acetone body metabolism, ketosis effect, *Shaw*, 1942, 142, 53
- , blood plasma glycoprotein utilization, *Reineke, Williamson, and Turner*, 1941, 138, 83
- , β -hydroxybutyric acid utilization, *Shaw and Knodt*, 1941, 138, 287
- Shaw and Petersen*, 1943, 147, 639
- , lactic acid non-utilization, *Powell and Shaw*, 1942, 146, 207
- Organ and tissue protein, metabolism, *Poo, Lew, and Addis*, 1939, 128, 69
- Lactic acid:** Bacteria, growth factor, purification and properties, *Hutchings, Bohonos, and Peterson*, 1941, 141, 521
- , —, glutamine and glutamic acid effect, *Pollack and Lindner*, 1942, 143, 655

Lactic acid—continued:

- Bacteria, growth, manganese relation, *Woolley*, 1941, 140, 311
- Benzimidazole derivative, characterization, *Dimler and Link*, 1942, 143, 557
- Biological material, determination, colorimetric, *Barker and Summerson*, 1941, 138, 535
- Blood, determination, blood collection, *Friedemann and Haugen*, 1942, 144, 67
- , *Plasmodium knowlesi* effect, *Wendel and Kimball*, 1942, 145, 343
- , pyruvic acid and, exercise effect, *Friedemann and Barborka*, 1941, 141, 993
- Brain, *Stone*, 1940, 135, 43
- Determination, colorimetric, *Koene-mann*, 1940, 135, 105
- , microdiffusion, ceric sulfate use, *Winnick*, 1942, 142, 451
- , ultramicro-, *Miller and Muntz*, 1938, 126, 413
- ✓ Fermentation, hydrogen ion concentration effect, *Gunsalus and Niven*, 1942, 145, 131
- Indole-. See Indolelactic acid
- Mammary gland, lactating, non-utilization, *Powell and Shaw*, 1942, 146, 207
- Metabolism, radioactive carbon-containing, *Vennesland, Solomon, Buchanan, Cramer, and Hastings*, 1942, 142, 371
- , — carboxyl carbon containing, *Conant, Cramer, Hastings, Klemp-erer, Solomon, and Vennesland*, 1941, 137, 557
- Muscle, formation, work effect, *Flock, Ingle, and Bollman*, 1939, 129, 99
- , metabolism *in vitro*, *Stadie and Zapp*, 1943, 148, 669
- β-Phenyl-, tyrosine, conversion, *Moos*, 1941, 137, 739
- Racemizing enzyme, *Clostridium butylicum*, *Christensen, Johnson, and Peterson*, 1939, 127, 421
- Radioactive, synthesis, *Cramer and Kistiakowsky*, 1941, 137, 549

- Lactobacillus arabinosus*: Amino acids, effect, *Shankman*, 1943, 150, 305
- p-Aminobenzoic acid determination, use, *Lewis*, 1942, 146, 441
- Lactobacillus casei*: Growth factor, *Clarke, Lechyccka, and Light*, 1942, 142, 957
- Pollack and Lindner*, 1943, 147, 183
- , chick nutrition, relation, *Hutch-ings, Bohonos, Hegsted, Elvehjem, and Peterson*, 1941, 140, 681
- , isolation, *Stokstad*, 1941, 139, 475
- , properties, *Stokstad*, 1943, 149, 573
- , hydrogen ion concentration change, vitamin determination, use, *Silber and Mushett*, 1942, 146, 271
- Microbiological determination, use, *Light and Clarke*, 1943, 147, 739
- Pantothenic acid determination, buffer and glucose effect, *Stokes and Martin*, 1943, 147, 483
- Stimulatory substance, blood, *Feeney and Strong*, 1942, 142, 961
- Lactogenic hormone: Pituitary, *Li, Lyons, and Evans*, 1940, 136, 709
- 1941, 139, 43
- 1941, 140, 43
- Li, Simpson, and Evans*, 1942, 146, 627
- Li*, 1942, 146, 633
- 1943, 148, 289
- , diffusion and viscosity measure-ments, *Li*, 1942, 146, 633
- , isolation, *Li, Simpson, and Evans*, 1942, 146, 627
- , molecular weight, *Li, Lyons, and Evans*, 1941, 140, 43
- , reactions with iodine, *Li, Lyons, and Evans*, 1941, 139, 43
- , sulfur amino acid, *Li*, 1943, 148, 289
- Reducing groups, thiols, effect, *Fraenkel-Conrat*, 1942, 142, 119
- Thiol compounds, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1942, 142, 107
- Tyrosine and tryptophane, *Li, Lyons, and Evans*, 1940, 136, 709

Lactoglobulin: β -, determination and molecular weight, *Brand and Kassel*, 1942, 145, 365
 —, hydrogen ion dissociation curve, *Cannan, Palmer, and Kibrick*, 1942, 142, 803
 Crystalline, peptide bonds, determination, *Hotchkiss*, 1939, 131, 387
Lactone: Saccharo-, amine-precipitating reagent, *Kurtz and Wilson*, 1939, 129, 693
Lactose: Calcium absorption, effect, *Roberts and Christman*, 1942, 145, 267
 Hydrolysis products, calcium absorption, effect, *Roberts and Christman*, 1942, 145, 267
 Utilization, fasting, *Coryell and Christman*, 1943, 150, 143
Lancefield: Group A hemolytic streptococcus, specific polysaccharide, purification and properties, *Zittle and Harris*, 1942, 142, 823
Lanthionine: Determination, *Hess and Sullivan*, 1942, 146, 15
 dl-, proteins, isolation, *Horn, Jones, and Ringel*, 1942, 144, 93
 Hair, feathers, and lactalbumin, isolation, *Horn and Jones*, 1941, 139, 473
 Insulin, *du Vigneaud, Brown, and Bonsnes*, 1941, 141, 707
 Meso-, growth effect, cystine-deficient diet, *Jones, Divine, and Horn*, 1942, 146, 571
 —, proteins, isolation, *Horn, Jones, and Ringel*, 1942, 144, 87
 Stereoisomeric forms, *Brown and du Vigneaud*, 1941, 140, 767
 Wool, isolation, *Horn, Jones, and Ringel*, 1941, 138, 141
 —, synthesis, *du Vigneaud and Brown*, 1941, 138, 151
Larva: *Cysticercus*, cerebroside containing dihydrosphingosine and hydrolecithin, *Lesuk and Anderson*, 1941, 139, 457
Lead: Biochemistry, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239

Lead—continued:

Biological material, determination, micro-, spectrochemical, *Duffendack, Thomson, Lee, and Koppius*, 1938, 126, 1
 Blood and bone, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239
 Poisoning, lead citrate complex ion, rôle, *Kety*, 1942, 142, 181
Lead acetate: Liver oxygen uptake, effect, *Baernstein and Grand*, 1941, 140, 285
Lead citrate: Ion complex, lead poisoning, rôle, *Kety*, 1942, 142, 181
Lecithin(s): Blood, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
 — serum, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
 Body fluids, determination, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
 Choline arsenic analogue, arsenocholine-fed rats, *Welch and Landau*, 1942, 144, 581
 Formation rate, body, unstable isotopes as indicator, *Chargaff*, 1939, 128, 587
 Fractions, egg yolk, fat acids, *Riemen-schneider, Ellis, and Titus*, 1938, 126, 255
 Hydro-, cerebroside containing, *Cysticercus* larvae, *Lesuk and Anderson*, 1941, 139, 457
 Liver, turnover, *Sinclair*, 1940, 134, 83
 Purification, *Pangborn*, 1941, 137, 545
 Tissue, *Thannhauser, Benotti, Walcott, and Reinstein*, 1939, 129, 717
 —, determination, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
 —, —, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
Leprosy bacillus: Lipids, *Geiger and Anderson*, 1939, 131, 539
 —, polysaccharide, *Anderson and Creighton*, 1939, 131, 549

- Leucemia:** Urine and feces specific substances, preparation, *Turner and Miller*, 1943, 147, 573
- Leucine:** *d*(+)-, metabolism and inversion, isotopes in study, *Ratner, Schoenheimer, and Rittenberg*, 1940, 134, 653
- dl*- and *l*-, esters, Raney catalyst, reaction, *Ovakimian, Christman, Kuna, and Levene*, 1940, 134, 151
- l*-, preparation, protein hydrolysates, *Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- l*(-)-, isotope-containing, body protein metabolism indicator, *Schoenheimer, Ratner, and Rittenberg*, 1939, 130, 703
- , solubility and specific rotation, *Stoddard and Dunn*, 1942, 142, 329
- Leucopenia:** Succinylsulfathiazole and, xanthopterin, effect, *Totter and Day*, 1943, 147, 257
- Sulfaguanidine effect, *Axelrod, Gross, Bosse, and Swingle*, 1943, 148, 721
- Leucosis:** Tumors, polysaccharide, *Kabat*, 1939, 130, 143
- Leucylpeptidase:** Malt, cabbage, and spinach, *Berger and Johnson*, 1939, 130, 655
- Occurrence, *Berger and Johnson*, 1940, 133, 157
- Levene, Phoebus Aaron Theodor:** Obituary, *Jacobs and Van Slyke*, 1941, 141, 1
- Levulose:** Blood, determination, diphenylamine use, *Corcoran and Page*, 1939, 127, 601
- See also Fructose
- Lichenin:** Oats, *Morris*, 1942, 142, 881
- Light:** Absorption, chlorophyll solutions, *Mackinney*, 1941, 140, 315
- Amino groups, determination, *Van Slyke*, effect, *Fraenkel-Conrat*, 1943, 148, 453
- Pyridoxine, effect, *Hochberg, Melnick, Segel, and Oser*, 1943, 148, 253
- Scattering, suspension of particles, *Drabkin and Singer*, 1939, 129, 739
- Vitamin K₁, effect, *Ewing, Tomkins, and Kamm*, 1943, 147, 233
- See also Ultraviolet radiation
- Lignoceryl sphingosine:** Fatty acid esters, synthesis, *Reichel and Thannhauser*, 1940, 135, 15
- Limulus polyphemus:** Hemocyanin, osmotic pressure, molecular weight, and dissociation, *Burk*, 1940, 133, 511
- Linoleic acid(s):** α - and β -, identity, *Riemenschneider, Wheeler, and Sando*, 1939, 127, 391
- Fat depot relation, *Longenecker*, 1939, 129, 13
- Fatty acid synthesis and storage, effect, *Visscher and Corley*, 1943, 147, 291
- Linolein:** Tri-, preparation, properties, and thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando*, 1940, 132, 687
- Lipase(s):** α -Butyrins, dimethyl ethers, hydrolysis, *Baer and Fischer*, 1942, 145, 61
- Castor bean, blood neutral fat, action, *Kelsey*, 1939, 130, 199
- , specificity, lipid analyses, *Kelsey*, 1939, 130, 187
- Lipid analysis, use, *Kelsey*, 1939, 130, 187, 195, 199
- Pancreas, activation, blood serum effect, *Rabinowitch and Wynne*, 1938, 126, 109
- , blood neutral fat, action, *Kelsey*, 1939, 130, 199
- , specificity, lipid analysis, use, *Kelsey*, 1939, 130, 195
- Lipemia:** Diabetic and alimentary, blood plasma and red blood cell lipids, *Rubin*, 1939, 131, 691
- Lipid(s):** Adrenals, *MacLachlan, Hodge, and Whitehead*, 1941, 139, 185
- , fasting effect, *Oleson and Bloor*, 1941, 141, 349
- Analysis, castor bean lipase use, *Kelsey*, 1939, 130, 187
- , lipase use, *Kelsey*, 1939, 130, 187, 195, 199
- , pancreas lipase use, *Kelsey*, 1939, 130, 195
- Animal, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709
- Thannhauser, Benotti, Walcott, and*

Lipid(s)—continued:

- Animal, *Reinstein*, 1939, 129, 717
Thannhauser and Reichel, 1940, 135, 1
Reichel and Thannhauser, 1940, 135, 15
Blastomyces dermatiditis, *Peck and Hauser*, 1940, 134, 403
Blood, atmospheric pressure, low, exposure, effect, *MacLachlan*, 1939, 129, 465
—, bird, sex hormones, crystalline, effect, *Entenman, Lorenz, and Chaikoff*, 1940, 134, 495
— cell, red, lipemia, diabetic and alimentary, *Rubin*, 1939, 131, 691
— —, —, phosphorus exchange, *Rapoport, Leva, and Guest*, 1941, 139, 633
—, chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
—, fasting and undernutrition effect, *Entenman, Changus, Gibbs, and Chaikoff*, 1940, 134, 59
—, fowl, estrin effect, *Lorenz, Chaikoff, and Entenman*, 1938, 126, 763
—, overnutrition effect, *Entenman and Chaikoff*, 1942, 142, 129
—, pancreatectomy and duct ligation with insulin, pancreatic juice ingestion effect, *Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
—, pancreatic duct ligation, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329
—, — —, effect, *Entenman, Chaikoff, and Montgomery*, 1939, 130, 121
— plasma, lipemia, diabetic and alimentary, *Rubin*, 1939, 131, 691
— —, petroleum ether extracts, nitrogenous contaminants, *Folch and Van Slyke*, 1939, 129, 539
— —, species variation, *Boyd*, 1942, 143, 131
—, pregnancy blood serum, fowl, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
— serum proteins, electrophoretically separated, *Blix, Tiselius, and Svensson*, 1941, 137, 485

Lipid(s)—continued:

- Blood serum, schizophrenia, testosterone effect, *Randall*, 1940, 133, 137
— —, testosterone effect, *Looney and Romanoff*, 1940, 136, 479
Bone marrow, anemia effect, *Krause*, 1943, 149, 395
Brain, autolysis effect, *Sperry, Brand, and Copenhaver*, 1942, 144, 297
—, deposition and metabolism, growth and myelination effect, *Waelisch, Sperry, and Stoyanoff*, 1941, 140, 885
—, metabolism, *Sperry, Waelisch, and Stoyanoff*, 1940, 135, 281
—, —, myelination effect, *Waelisch, Sperry, and Stoyanoff*, 1940, 135, 297
—, synthesis and deposition, deuterium as indicator, *Waelisch, Sperry, and Stoyanoff*, 1940, 135, 291
Carcass and liver, relation, *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 1941, 139, 897
Cell nuclei, *Stoneburg*, 1939, 129, 189
Central nervous system, deposition, growth effect, *Fries, Entenman, Changus, and Chaikoff*, 1941, 137, 303
Corpus luteum, cyclic variations, *Weinhouse and Brewer*, 1942, 143, 617
Deer, Virginia white-tailed, composition, *Treadwell and Eckstein*, 1939, 128, 373
Diatoms, *Clarke and Mazur*, 1941, 141, 283
Duodenum, fat absorption, relation, *Reiser*, 1942, 143, 109
Egg yolk sac, chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
Extraction, apparatus, *Kaye, Leibner, and Sobel*, 1941, 138, 643
Fasting, *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 1941, 139, 897
MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor, 1942, 143, 473

Lipid(s)—continued:

- Free blood serum, electrophoresis, *Bliz*, 1941, 137, 495
- Leprosy bacillus, *Geiger and Anderson*, 1939, 131, 539
- , polysaccharide, *Anderson and Creighton*, 1939, 131, 549
- Liver, *Artom and Fishman*, 1943, 148, 405
- and carcass, relation, *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 1941, 139, 897
- , autolysis effect, *Sperry, Brand, and Copenhaver*, 1942, 144, 297
- , chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
- , choline, ethanalamine, serine, cystine, homocysteine, and guanidoacetic acid, effect, *Stetten and Grail*, 1942, 144, 175
- , cocaine feeding, influence, *MacLachlan and Hodge*, 1939, 127, 721
- , dietary casein, cystine, and methionine, effect, *Treadwell, Groothuis, and Eckstein*, 1942, 142, 653
- , fasting and glucose feeding, effect, *Treadwell, Tidwell, and Grafa*, 1943, 149, 209
- , formalin fixation, effect, *Halliday*, 1939, 129, 65
- , pancreatic duct ligation, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329
- , — — —, effect, *Montgomery, Entenman, and Chaikoff*, 1939, 128, 387
- , pregnancy blood serum, fowl, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
- Metabolism, bird, endocrine effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
- Lorenz, Chaikoff, and Entenman*, 1938, 126, 763
- Entenman, Lorenz, and Chaikoff*, 1940, 134, 495
- , nutrition state, relation, *Entenman, Changus, Gibbs, and Chaikoff*, 1940, 134, 59

Lipid(s)—continued:

- Metabolism, nutrition state, relation, *Entenman and Chaikoff*, 1942, 142, 129
- , pancreas external secretion, effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
- Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
- Monilia albicans*, *Peck and Hauser*, 1940, 134, 403
- Muscle, *Artom and Fishman*, 1943, 148, 405
- Oxidase, *Sumner*, 1942, 146, 211, 215
- Phospho-. See Phospholipids
- Phytomonas tumefaciens*, *Geiger and Anderson*, 1939, 129, 519
- Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
- Tissue, insulin hypoglycemia effect, *Randall*, 1940, 133, 129
- , metabolism, *Sperry, Waelsch, and Stoyanoff*, 1940, 135, 281
- , synthesis and deposition, deuterium as indicator, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 291
- Tubercle bacillus, avian, bound, *Anderson, Creighton, and Peck*, 1940, 133, 675
- , chemistry, *Stodola, Lesuk, and Anderson*, 1938, 126, 505
- Wieghard and Anderson*, 1938, 126, 515
- Cason and Anderson*, 1938, 126, 527
- Anderson and Creighton*, 1939, 129, 57
- Geiger and Anderson*, 1939, 131, 539
- Anderson and Creighton*, 1939, 131, 549
- Anderson, Creighton, and Peck*, 1940, 133, 675
- Anderson, Peck, and Creighton*, 1940, 136, 211
- Lesuk and Anderson*, 1940, 136, 603
- Peck and Anderson*, 1941, 138, 135
- 1941, 140, 89
- Unsaponifiable, composition, *Waelsch and Sperry*, 1940, 132, 787

Lipocalc: Lipotropic effect, *Gavin, Paterson, and McHenry*, 1943, 148, 275

Lipoid: Thiocyanate, blood serum, *Rosenbaum and Lavietes*, 1939, 131, 663

Lipoprotein(s): *Chargaff*, 1942, 142, 491

Lipositol: Soy bean, isolation and chemical constitution, *Woolley*, 1943, 147, 581

Lipotropic action: Sulfur-containing amino acids, *Singal and Eckstein*, 1941, 140, 27

Lipotropic factor: Inositol, *Gavin and McHenry*, 1941, 139, 485

Lipotropic methyl: Choline synthesis, relation, *Stetten*, 1942, 142, 629

Lipoxidase: Soy bean, *Balls, Axelrod, and Kies*, 1943, 149, 491

Specificity, *Sumner*, 1942, 146, 211

Liquefier: Tissue, apparatus, *Shelesnyak and Biskind*, 1942, 143, 663

Liver: Acetic acid, non-formation, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 75

Acetone body formation, *Crandall*, 1940, 135, 139

Alanine oxidation by, factors influencing, *Rossiter*, 1940, 135, 431

Alkalosis effect, *Yannet*, 1940, 136, 265

Amino acid autolysis, *Luck, Eudin, and Nimmo*, 1939, 131, 201

— — oxidation, thyroid feeding and thyroidectomy effect, *Klein*, 1939, 128, 659

d-Amino acid oxidase, thyroid feeding effect, *Klein*, 1939, 131, 139

Arginase, *Richards and Hellerman*, 1940, 134, 237

—, adrenalectomy and adrenocortical steroids, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1943, 147, 99

—, food effect, *Lighbody and Kleinman*, 1939, 129, 71

—, testosterone propionate effect, *Kochakian and Clark*, 1942, 143, 795

Bile, choline, free, and phospholipid, *Johnston, Irvin, and Walton*, 1939, 131, 425

Liver—continued:

Biotin, isolation, *du Vigneaud, Hofmann, Melville, and György*, 1941, 140, 643

Butyric acid oxidation, glycogen effect, *Bobbitt and Deuel*, 1942, 143, 1

Calcium distribution, *Eichelberger and McLean*, 1942, 142, 467

Carbohydrate synthesis, normal and diabetic, *Stadie, Lukens, and Zapp*, 1940, 132, 393

Carbon dioxide utilization, *Evans and Slotin*, 1941, 141, 439

Carbonyl compound, identity, *Lehninger*, 1943, 149, 43

Catalase activity, tumor-bearing rats, tumor extirpation effect, *Greenstein, Jenrette, and White*, 1941, 141, 327

—, crystalline, *Dounce*, 1942, 143, 497

Cell nuclei, isolated, enzymes, *Dounce*, 1943, 147, 685

— tumors, vitamin A relation, *Goerner and Goerner*, 1939, 128, 559

Cephalins, turnover, *Sinclair*, 1940, 134, 83

Cholesterol esterase, *Sperry and Brand*, 1941, 137, 377

Choline action, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 127, 211

— oxidase, fatty acid action, *Bernheim*, 1940, 133, 291

Components, storage, *McBride, Guest, and Scott*, 1941, 139, 943

Creatine formation, *Borsook and Dubnoff*, 1940, 134, 635

— —, glycocyamine relation, *Borsook and Dubnoff*, 1940, 132, 559

— —, — —, nephrectomy effect, *Bodansky, Duff, and McKinney*, 1941, 140, 365

Cysteine and cystine utilization, hydrogen sulfide production, relation, *Smythe*, 1942, 142, 387

— formation, *ll-S-(β -amino- β -carboxy-ethyl)homocysteine*, relation, *Binkley, Anslow, and du Vigneaud*, 1942, 143, 559

Liver—continued:

- Cysteine formation, homocysteine and serine relation, *Binkley and du Vigneaud*, 1942, 144, 507
- Electrolytes, extracellular, depletion effect, *Yannet and Darrow*, 1940, 134, 721
- Enzymes, fatty acid oxidation, *Muñoz and Leloir*, 1943, 147, 355
- Extract, bios factor, *Alexander and Subbarow*, 1940, 135, 341
- , cell-free, amino nitrogen disappearance, *Ågren, Hammarsten, and Rosdahl*, 1939, 127, 541
- , —, carbon dioxide assimilation, *Evans, Slotin, and Vennesland*, 1942, 143, 565
- , —, — fixation, mechanism, *Evans, Vennesland, and Slotin*, 1943, 147, 771
- , fat synthesis and metabolism, effect, *McHenry and Garin*, 1940, 134, 683
- , —, relation, *Longenecker, Garin, and McHenry*, 1941, 139, 611
- Fat, *Marble, Grafflin, and Smith*, 1940, 134, 253
- and water relation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473
- , bromo-substituted fatty acids, effect, *Artom and Swanson*, 1943, 148, 633
- , carbohydrate synthesis, diabetes, *Stadie, Zapp, and Lukens*, 1941, 137, 63
- , choline effect, *Handler and Bernheim*, 1943, 148, 649
- , fasting ketosis, diet relation, *MacKay, Carne, Wick, and Visscher*, 1941, 141, 889
- , mineral and choline deficiency, effect, *Handler*, 1943, 149, 291
- , transport, adrenals, effect, *Barnes, Miller, and Burr*, 1941, 140, 247
- , vitamin B₆ effect, *Gavin and McHenry*, 1940, 132, 41
- Fatty acids, diabetes, ketone body relation, *Stadie, Zapp, and Lukens*, 1941, 137, 75

Liver—continued:

- Fatty acids, replacement rate, *Stetten and Grail*, 1943, 148, 509
- , casein effect, *Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , choline oxidase, *Handler and Bernheim*, 1942, 144, 401
- , cystine effect, *Tucker and Eckstein*, 1938, 126, 117
- Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , depancreatized dogs with insulin, choline relation, *Entenman and Chaikoff*, 1941, 138, 477
- , edestin effect, *Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , fat-high diet, effect, *Tucker and Eckstein*, 1938, 126, 117
- Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , gliadin effect, *Tucker and Eckstein*, 1938, 126, 117
- , glucose tolerance, relation, *Treadwell, King, Bebb, and Tidwell*, 1942, 143, 203
- , —, sexual variation, *Deuel and Davis*, 1942, 146, 646
- , lysine effect, *Tucker and Eckstein*, 1938, 126, 117
- , methionine effect, *Tucker and Eckstein*, 1938, 126, 117
- Tucker, Treadwell, and Eckstein*, 1940, 135, 85
- , pancreatectomy and duct ligation, pancreatic juice ingestion effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
- , phospholipids, *Flock, Hester, and Bollman*, 1939, 128, 153
- Function, blood plasma amino acid retention, hypoproteinemia, relation, *Goettsch, Lyttle, Grim, and Dunbar*, 1942, 144, 121
- Glycogen, *Marble, Grafflin, and Smith*, 1940, 134, 253
- , adrenal cortex principles, effect, *Grattan and Jensen*, 1940, 135, 511
- , age effect, *Heymann and Modic*, 1939, 131, 297

Liver—continued:

- Glycogen deposition, glucose, glycine, and *dl*-alanine effect, *MacKay, Wick, and Carne*, 1940, 132, 613
- , water relation, *Fenn and Haege*, 1940, 136, 87
- , fasting and glucose feeding, effect, *Treadwell, Tidwell, and Grafa*, 1943, 149, 209
- , — effect, *Heymann and Modic*, 1939, 131, 297
- formation, alanine isomers, effect, *MacKay, Wick, and Barnum*, 1941, 137, 183
- , *d*(+)-histidine and *l*(-)-histidine effect, *Featherstone and Berg*, 1942, 146, 131
- hydration, *McBride, Guest, and Scott*, 1941, 139, 943
- , *dl*-lysine monohydrochloride effect, *Sharp and Berg*, 1941, 141, 739
- , pituitary adrenocorticotrophic hormone effect, *Graitan and Jensen*, 1940, 135, 511
- , potassium, and phosphate, relation, *Fenn*, 1939, 128, 297
- , radioactive acetic, propionic, and butyric acids in study, *Buchanan, Hastings, and Nesbitt*, 1943, 150, 413
- synthesis, glucose-1-phosphate rôle, *Cori, Cori, and Schmidt*, 1939, 129, 629
- , temperature effect, glucose and starch administration, *Rafferty and MacLachlan*, 1941, 140, 167
- , tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and *l*(-)-kynurenine effect, *Borchers, Berg, and Whitman*, 1942, 145, 657
- , water relation, *McBride, Guest, and Scott*, 1941, 139, 943
- Glycogenesis, fasting effect, *McBride*, 1943, 147, 333
- Injury, fat metabolism, effect, *Winter*, 1939, 128, 283
1940, 135, 123
1942, 142, 17

Liver—continued:

- Ketogenesis and ketolysis, species difference, *Cohen and Stark*, 1938, 126, 97
- Lecithins, turnover, *Sinclair*, 1940, 134, 83
- Lipids, *Artom and Fishman*, 1943, 148, 405
- and carcass lipids, relation, *Hodge, MacLachlan, Bloor, Stoneburg, Oleson, and Whitehead*, 1941, 139, 897
- , autolysis effect, *Sperry, Brand, and Copenhaver*, 1942, 144, 297
- , chick, changes, *Entenman, Lorenz, and Chaikoff*, 1940, 133, 231
- , choline, ethanalamine, serine, cystine, homocysteine, and guanidoacetic acid, effect, *Stetten and Grahl*, 1942, 144, 175
- , cocaine feeding, influence, *MacLachlan and Hodge*, 1939, 127, 721
- , dietary casein, cystine, and methionine, effect, *Treadwell, Groothuis, and Eckstein*, 1942, 142, 653
- , fasting and glucose feeding, effect, *Treadwell, Tidwell, and Grafa*, 1943, 149, 209
- , formalin fixation, effect, *Halliday*, 1939, 129, 65
- , pancreatic duct ligation, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329
- , — —, effect, *Montgomery, Entenman, and Chaikoff*, 1939, 128, 387
- , pregnancy blood serum, fowl, effect, *Entenman, Lorenz, and Chaikoff*, 1938, 126, 133
- Magnesium distribution, *Eichelberger and McLean*, 1942, 142, 467
- Metabolism, anoxia, fasting, *Craig*, 1943, 150, 209
- N-Methylamino acids, oxidation, *in vitro*, *Handler, Bernheim, and Klein*, 1941, 138, 203
- Nicotinamide methylation, *in vitro*, *Perlzweig, Bernheim, and Bernheim*, 1943, 150, 401

Liver—continued:

- Oxidations, manganese and other metals, action, *Bernheim and Bernheim*, 1939, 128, 79
- Oxygen uptake, lead acetate effect, *Baernstein and Grand*, 1941, 140, 285
- Phosphates, acid-soluble, carbohydrate metabolism and, radioactive phosphorus in study, *Kaplan and Greenberg*, 1943, 150, 479
- , glycogen, and potassium, relation, *Fenn*, 1939, 128, 297
- Phosphoglycerol, acid-soluble, determination, *Leva and Rapoport*, 1943, 149, 47
- Phospholipid formation *in vitro*, anaerobiosis and respiratory inhibitors, radioactive phosphorus as indicator, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281
- metabolism, betaine influence, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 130, 593
- , cholesterol influence, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 128, 735
- *in vitro*, radioactive phosphorus as indicator, *Fishler, Taurog, Perlman, and Chaikoff*, 1941, 141, 809
- turnover, *Sinclair*, 1940, 134, 71
- , methionine, cystine, and cysteine influence, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 133, 651
- Phospholipids, amino acid effect, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 135, 359
- , fractionation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473
- Phosphorus, acid-soluble, distribution, fasting, diet effect, *Rapoport, Leva, and Guest*, 1943, 149, 65
- , —, —, — effect, *Rapoport, Leva, and Guest*, 1943, 149, 57
- , —, —, —, epinephrine, and insulin, effect, *Nelson, Rapoport, Guest, and Mirsky*, 1942, 144, 291

Liver—continued:

- Porphyryn metabolism, *Salzburg and Watson*, 1941, 139, 593
- Potassium, phosphate, and glycogen, relation, *Fenn*, 1939, 128, 297
- Protein autolysis, *Luck, Eudin, and Nimmo*, 1939, 131, 201
- Protoporphyrin conversion to coproporphyrin, *Watson, Pass, and Schwartz*, 1941, 139, 583
- Salzburg and Watson*, 1941, 139, 593
- Pyruvate metabolism, pantothenic acid and biotin effect, *Pilgrim, Azelrod, and Elvehjem*, 1942, 145, 237
- Pyruvic acid dissimilation, carbon dioxide fixation, *Wood, Werkman, Hemingway, and Nier*, 1942, 142, 31
- Respiration, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
- , pyrophosphate and various media, effect, *Feinstein and Stare*, 1940, 135, 393
- Riboflavin, *Supplee, Jensen, Bender, and Kahlenberg*, 1942, 144, 79
- Succinoxidase system, riboflavin deficiency, *Azelrod, Swingle, and Elvehjem*, 1942, 145, 297
- Tissue suspension respiration, metabolites and salts, effect, *Elliott and Elliott*, 1939, 127, 457
- Tocopherol determination, chemical, *Hines and Mattill*, 1943, 149, 549
- Urea formation, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
- synthesis, *Gornall and Hunter*, 1943, 147, 593
- , carbon dioxide rôle, *Evans and Slotin*, 1940, 136, 805
- Uricase, diet effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
- Water, *Marble, Graftlin, and Smith*, 1940, 134, 253
- and fat relation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473

Liver—continued:

Water balance, fasting and glucose feeding effect, *McBride*,

1943, 147, 333

—, glycogen relation, *McBride, Guest, and Scott*,

1941, 139, 943

—, potassium salts, injection effect, *Eichelberger*,

1941, 138, 583

Xanthine oxidase, riboflavin effect, *Axelrod and Elvehjem*,

1941, 140, 725

See also Hepatectomy

Luciferin: Absorption spectrum, *Chase*,

1943, 150, 433

Oxidized, absorption spectrum, *Chase*,

1943, 150, 433

Lung(s): Fat metabolism, *MacLachlan*,

1942, 146, 45

Parenchyma electrolytes, *Wood*,

1942, 143, 165

Protein, thromboplastic, blood coagulation, action, *Cohen and Chargaff*,

1940, 136, 243

—, —, electrophoresis, *Cohen and Chargaff*,

1941, 140, 689

—, —, isolation, *Chargaff, Moore, and Bendich*,

1942, 145, 593

—, —, phosphatides, blood coagulation, action, *Cohen and Chargaff*,

1941, 139, 741

See also Pleural fluid

Lupinus angustifolius: Seedlings, etiolated, asparagine and glutamine formation, *Vickery and Pucher*,

1943, 150, 197

Luteinizing hormone: Pituitary, separation, *Greep, van Dyke, and Chow*,

1940, 133, 289

Lycopene: Pro-, *Eronymus fortunei*, isolation, *Zechmeister and Escue*,

1942, 144, 321

—, *Pyraacantha angustifolia* fruit, *Zechmeister and Schroeder*,

1942, 144, 315

Lymphoma: Phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*,

1939, 128, 631

Lymphosarcoma: Phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*,

1939, 128, 631

Lysergic acid: Base, 6,8-dimethylergoline, synthetic, comparison, *Jacobs and Gould*,

1939, 130, 399

Dihydro-, dimethylindole from, *Jacobs and Craig*,

1939, 128, 715

dl- and d-, 6,8-dimethylergolines, transformation, *Gould, Craig, and Jacobs*,

1942, 145, 487

-Related substances, synthesis, *Jacobs and Gould*,

1938, 126, 67

Lysine: *Dakin*,

1942, 146, 237

Anemia, deaminized casein-produced, relation, *Hogan, Powell, and Guerrant*,

1941, 137, 41

d-, metabolism, deuterium and heavy nitrogen in study, *Ratner, Weissman, and Schoenheimer*,

1943, 147, 549

α -N-Dimethyl-, growth availability, *Gordon*,

1939, 127, 487

dl-, metabolism, *Butts and Sinnhuber*,

1941, 140, 597

Hydroxy-, *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*,

1940, 133, 287

—, dissociation constants, *Klemperer, Hastings, and Van Slyke*,

1942, 143, 433

—, proteins, determination, *Van Slyke, Hiller, and MacFadyen*,

1941, 141, 681

l(+)-, isolation, *Kurtz*,

1941, 140, 705

—, stability, deuterium and heavy nitrogen in study, *Weissman and Schoenheimer*,

1941, 140, 779

Liver fat, effect, *Tucker and Eckstein*,

1938, 126, 117

α -N-Monomethyl-, growth availability, *Gordon*,

1939, 127, 487

Protein hydrolysates, isolation, *Rice*,

1939, 131, 1

Utilization, growth, optical isomerism influence, *Totter and Berg*,

1939, 127, 375

Lysine monohydrochloride: *dl*-, liver glycogen and acetone body excretion, effect, *Sharp and Berg*,

1941, 141, 739

Lysophosphatide(s): *Chargaff and Cohen*, 1939, 129, 619

M

Macrosiphum pisi: *See* Aphid

Magnesium: Anesthesia, adenosine triphosphate relation, *DuBois, Albaum, and Potter*, 1943, 147, 699

Biological material, determination, micro-, spectrochemical, *Duffendack, Thomson, Lee, and Koppius*, 1938, 126, 1

Blood, distribution, *Snyder and Katzenbogen*, 1942, 143, 223

-Deficient diet, blood serum phosphatase, effect, *Snyder and Tweedy*, 1942, 146, 639

Determination, manometric, micro-, *Hoagland*, 1940, 136, 553

Distribution, magnesium sulfate administration, effect, *Smith, Winkler, and Schwartz*, 1939, 129, 51

Ionized, milk, *Nordbø*, 1939, 128, 745

Muscle and liver, distribution, *Eichelberger and McLean*, 1942, 142, 467

Magnesium bicarbonate: Dissociation, *Greenwald*, 1941, 141, 789

Magnesium carbonate: Dissociation, *Greenwald*, 1941, 141, 789

Magnesium phosphate: Dissociation, *Greenwald, Redish, and Kibrick*, 1940, 135, 65

Secondary, ionization constant, *Tabor and Hastings*, 1943, 148, 627

Magnesium sulfate: Magnesium distribution, parenteral administration effect, *Smith, Winkler, and Schwartz*, 1939, 129, 51

Maize: Seed, glycogen, *Morris and Morris*, 1939, 130, 535

See also Corn

Malaria: *See also* *Plasmodium knowlesi*

Malic acid: Crassulacean, isocitric acid, identity, *Pucher and Vickery*, 1942, 145, 525

Malonate: Tissue respiration, effect, *Baumann and Stare*, 1940, 133, 133

Triose phosphate oxidation, effect, *Potter*, 1940, 134, 417

Malonic acid: Determination, *Christensen and Ross*, 1941, 137, 101

Malonyl albumin: Egg and blood serum, chymotryptic digestion, *Ross and Tracy*, 1942, 145, 19

Malonyl pepsin: *Tracy and Ross*, 1942, 146, 63

Malt: Diastase, plant nutrients, inorganic, effect, *Braun*, 1942, 145, 197

Leucylpeptidase, *Berger and Johnson*, 1939, 130, 655

Maltose: Fermentation, alkaline solutions, *Stark and Somogyi*, 1942, 142, 579

Mammary gland: Lactating, acetone body metabolism, ketosis effect, *Shaw*, 1942, 142, 53

—, blood plasma glycoprotein utilization, *Reineke, Williamson, and Turner*, 1941, 138, 83

—, β -hydroxybutyric acid utilization, *Shaw and Knodt*, 1941, 138, 287

—, lactic acid non-utilization, *Powell and Shaw*, 1942, 146, 207

Manganese: Bile, distribution and excretion, radioactive isotopes in study, *Greenberg, Copp, and Cuthbertson*, 1943, 147, 749

Biological materials, determination, micro-, *Wiess and Johnson*, 1939, 127, 203

Body tissue, determination, *Ray*, 1940, 134, 677

Deficiency, *Boyer, Shaw, and Phillips*, 1942, 143, 417

Intestine peptidases, effect, *Smith and Bergmann*, 1941, 138, 789

Lactic acid bacteria, growth, relation *Woolley*, 1941, 140, 311

Liver oxidations, action, *Bernheim and Bernheim*, 1939, 128, 79

Mesoporphyrin, nitrogenous bases, coordination, *Taylor*, 1940, 135, 569

Manganese—continued:

- Milk, determination, *Ray*,
1940, 134, 677
- Organic material, determination, *Ray*,
1940, 134, 677
- Manganous uranyl acetate: Sodium deter-
mination, colorimetric, micro-, use,
Leva, 1940, 132, 487
- Mannide: Iso-, kidney excretion, *Smith*,
Finkelstein, and *Smith*,
1940, 135, 231
- Mannitol: Kidney excretion, *Smith*,
Finkelstein, and *Smith*,
1940, 135, 231
- Metabolism, *Todd*, *Myers*, and *West*,
1939, 127, 275
Ellis and *Krantz*, 1941, 141, 147
- Toxicity, *Ellis* and *Krantz*,
1941, 141, 147
- Mannoheptulose: *d*-, excretion, avocado
ingestion effect, *Blatherwick*, *Larson*,
and *Sawyer*, 1940, 133, 643
- Manometer: Injection, *Marsh* and
Carlson, 1940, 136, 69
- Metabolism study, *Summerson*,
1939, 131, 579
- Marine organism(s): Iron-porphyrin
compounds and succinic dehydro-
genase, *Ball* and *Meyerhof*,
1940, 134, 483
- Meat: Thiamine, curing effect, *Green-*
wood, *Beadle*, and *Kraybill*,
1943, 149, 349
- Meigs, Edward Browning: Obituary,
Howe, 1942, 142, 1
- Membrane(s): Cellophane, preparation,
Seymour, 1940, 134, 701
- Mercaptoacetic acid: Iron determination,
spectrophotometric, use in, *Koenig*
and *Johnson*, 1942, 142, 233
- Mercapturic acid: Synthesis, animals,
Stekol, 1939, 127, 131
1939, 128, 199
1941, 138, 225
- Mercuric chloride: Methionine and
amino acids, reaction, *Toennies* and
Kolb, 1938, 126, 367
- Mercury: Amino nitrogen determination,
nitrous acid use, effect, *Kendrick*
and *Hanke*, 1940, 132, 739

Mercury—continued:

- Determination, micro-, *Crandall*,
1940, 133, 539
- Mesolanthionine: Growth effect, cystine-
deficient diet, *Jones*, *Divine*, and
Horn, 1942, 146, 571
- Proteins, isolation, *Horn*, *Jones*, and
Ringel, 1942, 144, 87
- Mesoporphyrin: Cobalt and manganese,
nitrogenous bases, coordination,
Taylor, 1940, 135, 569
- Iron, nitrogenous bases, coordination,
Davies, 1940, 135, 597
- Protoporphyrin conversion, micro,
Grinstein and *Watson*,
1943, 147, 671
- Metabolism: Apparatus, manometer,
Summerson, 1939, 131, 579
- Basal. See Basal metabolism
- Intermediary, diabetes, *Stadie*, *Zapp*,
and *Lukens*, 1941, 137, 63, 75
- Methionine sulfonium reactions, rela-
tion, *Toennies*, 1940, 132, 455
- Phenylpyruvic oligophrenia, *Jervis*,
1938, 126, 305
- Respiratory. See Respiratory metab-
olism
- Tissue, hemorrhage shock, effect,
Beecher and *Craig*, 1943, 148, 383
- , riboflavin and vitamin B heat-
stable components, effect, *Hasting*,
Muus, and *Bessey*, 1939, 129, 295
- , thiamine effect, *Muus*, *Weiss*, and
Hastings, 1939, 129, 303
- Transmethylation and, *Simmonds* and
du Vigneaud, 1942, 146, 685
- Metabolite(s): Intermediary, liver tissue
suspension respiration, effect, *Elliott*
and *Elliott*, 1939, 127, 457
- Metal(s): Ions, phosphopyruvate re-
action, *Escherichia coli*, effect, *Utter*
and *Werkman*, 1942, 146, 289
- Liver oxidations, action, *Bernheim*
and *Bernheim*, 1939, 128, 79
- Peptidase activation, *Berger* and
Johnson, 1939, 130, 641
- Metalloporphyrin(s): *Clark*, *Taylor*,
Davies, and *Vestling*,
1940, 135, 543
Taylor, 1940, 135, 569

Metalloporphyrin(s)—continued:

- Davies*, 1940, 135, 597
Vestling, 1940, 135, 623
Clark and Perkins, 1940, 135, 643
 Nitrogenous bases, coordination,
Clark, Taylor, Davies, and Vestling,
 1940, 135, 543
Metanephros: Fetus, cytochrome ox-
dase-cytochrome system, oxidation-
reduction potentials, Flezner,
 1939, 131, 703
Metaphosphoric acid: -Protein reaction,
Briggs, 1940, 134, 261
 Proteins and, combination, *Perlmann*,
 1941, 137, 707
Methane: Fermentation, Barker,
 1941, 137, 153
Methanobacterium omelianskii: Bio-
chemistry, Barker, 1941, 137, 153
Methemoglobin: Blood, sulfanilamide
administration effect, Wendel,
Wendel, and Cox, 1939, 131, 177
 Determination, micro-, *Evelyn and*
Malloy, 1938, 126, 655
 -Hemoglobin system, oxidation-reduc-
 tion potentials, *Taylor and Hastings*,
 1939, 131, 649
 — —, urea solution, oxidation-reduc-
 tion potentials, *Taylor*,
 1942, 144, 7
 Reduction, *Cox and Wendel*,
 1942, 143, 331
 —, ascorbic acid effect, *Vestling*,
 1942, 143, 439
Methionine: Toennies and Kolb,
 1938, 126, 367
 1939, 128, 399
Toennies and Callan,
 1939, 129, 481
Kolb and Toennies, 1939, 131, 401
Toennies and Kolb, 1941, 140, 131
 Blood globins, species differences,
Beach, Bernstein, Hummel, Wil-
liams, and Macy, 1939, 130, 115
 — serum albumin, absence, *Brand and*
Kassell, 1941, 141, 999
 Color reaction, *Kolb and Toennies*,
 1939, 131, 401
Sofin, Rosenblum, and Shultz,
 1943, 147, 557

Methionine—continued:

- Cystine conversion, radioactive sulfur
 as indicator, *Tarver and Schmidt*,
 1939, 130, 67
 Derivatives, metabolism, tissue slices,
Borek and Waelsch, 1941, 141, 99
 Determination, gravimetric, *Beach*
and Teague, 1942, 142, 277
 —, hydrogen peroxide oxidation,
Toennies and Callan, 1939, 129, 481
 Dietary, cystinuria, effect, *Hess and*
Sullivan, 1942, 143, 545
 —, liver lipid, effect, *Treadwell*,
Groothuis, and Eckstein,
 1942, 142, 653
dl., blood plasma ultrafiltrate cystine
 and sulfur distribution, administra-
 tion effect, *Brown and Lewis*,
 1941, 138, 717
 —, diet, α -keto acid analogue, replace-
 ment, *Cahill and Rudolph*,
 1942, 145, 201
 —, *dl*-methionine sulfone and methyl-
 sulfonium chloride replacement of,
Bennett, 1941, 141, 573
 Fatty livers, effect, *Tucker, Treadwell*,
and Eckstein, 1940, 135, 85
 Growth effect, cystine relation,
Womack and Rose, 1941, 141, 375
 Hemorrhagic degeneration, relation,
Griffith and Wade, 1940, 132, 627
 Homocystine replacement of, choline
 and betaine effect, comparison,
Chandler and du Vigneaud,
 1940, 135, 223
 — — —, — effect, *du Vigneaud*,
Chandler, Moyer, and Keppel,
 1939, 131, 57
 — — —, vitamin B complex supple-
 ment, relation, *du Vigneaud, Dyer*,
and Kies, 1939, 130, 325
 Insulin, presence, *du Vigneaud*,
Miller, and Rodden, 1939, 131, 631
l(—)-, creatine synthesis, specificity,
Handler and Bernheim,
 1943, 150, 335
 Liver fat, effect, *Tucker and Eckstein*,
 1938, 126, 117

Methionine—continued:

- Liver phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 133, 651
- Mercuric chloride, reaction, *Toennies and Kolb*, 1938, 126, 367
- Metabolism, cystinuria, *Lough, Perlestein, Heinen, and Carter*, 1941, 139, 487
- , tissue slices, *Borek and Waelsch*, 1941, 141, 99
- Methyl group, choline and creatine synthesis, biological, rôle, *du Vigneaud, Cohn, Chandler, Schenck, and Simmonds*, 1941, 140, 625
- — transfer to choline and creatine, *du Vigneaud, Chandler, Cohn, and Brown*, 1940, 134, 787
- Nutrition essential, chick, *Klose and Almquist*, 1941, 138, 467
- Oxidative reactions, *Toennies and Callan*, 1939, 129, 481
- Peanut proteins, *Brown*, 1942, 142, 299
- Protein-free, casein conversion, *Toennies*, 1942, 145, 667
- Radioactive, sulfur-containing, body protein radioactive sulfur distribution, ingestion effect, *Tarrer and Schmidt*, 1942, 146, 69
- , —, synthesis, *Tarrer and Schmidt*, 1942, 146, 69
- Skin, human, *Wilkerson and Tulane*, 1939, 129, 477
- Spermatozoa, *Zittle and O'Dell*, 1941, 141, 239
- Stratum corneum, human, *Wilkerson and Tulane*, 1939, 129, 477
- Sulfonium reactions, metabolic significance, *Toennies*, 1940, 132, 455
- Sulfur, taurine sulfur conversion, *Tarrer and Schmidt*, 1942, 146, 69
- Synthesis, biological, choline methyl groups, use, *Simmonds, Cohn, Chandler, and du Vigneaud*, 1943, 149, 519
- Test, colorimetric, *McCarthy and Sullivan*, 1941, 141, 871

Methionine methylsulfonium chloride:

- dl*-, *dl*-methionine replacement by, *Bennett*, 1941, 141, 573
- Methionine sulfone: *dl*-, *Toennies and Kolb*, 1941, 140, 131
- , *dl*-methionine replacement by, *Bennett*, 1941, 141, 573
- Methionine sulfoxide: *dl*-, *Toennies and Kolb*, 1939, 128, 399
- Taurocholic acid production, effect, *Virtue and Doster-Virtue*, 1941, 137, 227
- Methoxy acid(s): α -Amino- β -, purification, β -phenethylamine use, *Carter and Risser*, 1941, 139, 255
- Methylamino acid(s): N-, activity, aqueous solution, *Smith and Smith*, 1940, 132, 57
- , oxidation, kidney and liver, *in vitro*, *Handler, Bernheim, and Klein*, 1941, 138, 203
- Methyl arachidonate: Spectroscopy, *Mowry, Brode, and Brown*, 1942, 142, 671
- Methylaspartic acid(s): Methylation, *Dakin*, 1941, 141, 945
- Methylcholanthrene: Growth effect, *White and White*, 1939, 131, 149
- Methylenebis(4-hydroxycoumarin): 3,3', blood plasma prothrombin, effect, *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 1942, 142, 941
- , prothrombin time, 2-methyl-1,4-naphthoquinone and *l*-ascorbic acid effect, *Overman, Stahmann, and Link*, 1942, 145, 155
- , vitamin C excretion and hypoprothrombinemia, effect, *Baumann, Field, Overman, and Link*, 1942, 146, 7
- Methylglycine: N-, hippuric acid synthesis, availability, *Abbott and Lewis*, 1939, 131, 479
- Methylheptanoic acid: 2-, 4-methylnonanoic acid, configurational relationship, *Levene and Kuna*, 1941, 140, 255
- Methyl-1,4-naphthoquinone: 2-, anti-hemorrhagic activity, *Almquist and Klose*, 1939, 130, 787

Methyl-1,4-naphthoquinone—continued:

- 2-, blood and blood plasma, reactions, *Scudi and Buhs*, 1942, 144, 599
 —, 3,3'-methylenebis(4-hydroxycoumarin) action and prothrombin time, effect, *Overman, Stahmann, and Link*, 1942, 145, 155
 —, vitamin K₁, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm*, 1940, 132, 467

Methylnicotinamide: N¹-, urine, Huff and Perlzweig, 1943, 150, 395

- , —, determination, *Huff and Perlzweig*, 1943, 150, 483
Methylnonanoic acid: 4-, 2-methylheptanoic acid, configurational relationship, Levene and Kuna, 1941, 140, 255

Methylthiazoline: 2-, properties, proteins, relation, Linderstrøm-Lang and Jacobsen, 1941, 137, 443**Methyltryptophane: N-, acetyl, growth effect, Gordon, Cahill, and Jackson, 1939, 131, 189****Metmyoglobin: -Myoglobin system, oxidation-reduction potentials, Taylor and Morgan, 1942, 144, 15****Microbial action: Anti-, wheat protein, crystalline, phosphatide reversal, effect, Woolley and Krampitz, 1942, 146, 273****Micrometer burette: Scholander, Edwards, and Irving, 1943, 148, 495****Microorganism(s): Glucose-non-fermenting, oxidations, Barron and Friedemann, 1941, 137, 593**

- Growth, asparagine-glutamate effect, *Bovarnick*, 1943, 148, 151
 See also *Achlya*, *Actinomyces*, *Bacillus*, *Bacteria*

Milk: Biotin isolation, Melville, Hofmann, Hague, and du Vigneaud, 1942, 142, 615

- Calcium, ionized, *Nordbø*, 1939, 128, 745

- Derivatives, nicotinic acid determination, chemical, *Noll and Jensen*, 1941, 140, 755

- Dolphin, *Eichelberger, Fetcher, Geiling, and Vos*, 1940, 134, 171

Milk—continued:

- Flavoprotein, diphosphopyridine nucleotide, reduced, oxidation, effect, *Ball and Ramsdell*, 1939, 131, 767
 Magnesium, ionized, *Nordbø*, 1939, 128, 745

- Manganese determination, *Ray*, 1940, 134, 677

- Nicotinic acid determination, chemical, *Noll and Jensen*, 1941, 140, 755

- Nitrogen distribution, *Beach, Bernstein, Hoffman, Teague, and Macy*, 1941, 139, 57

- Protein amino acids, distribution, *Beach, Bernstein, Hoffman, Teague, and Macy*, 1941, 139, 57

- Proteins, hydroxyglutamic acid, *Nicolet and Shinn*, 1942, 142, 139

- Sulfhydryl groups, *Greenstein*, 1940, 136, 795

- Thiamine, free and combined, *Halliday and Deuel*, 1941, 140, 555

Mineral(s): Deficiency, liver fat, effect, Handler, 1943, 149, 291

- Metabolism, cortin and sodium chloride effect, adrenalectomy, *Kendall, Flock, Bollman, and Mann*, 1938, 126, 697

- , phosphorus-deficient diet, effect, *Day and McCollum*, 1939, 130, 269

- , radioactive isotopes in study, *Joseph, Cohn, and Greenberg*, 1939, 128, 673

- Cohn and Greenberg*, 1939, 130, 625

- Greenberg, Campbell, and Murayama*, 1940, 136, 35

- Greenberg, Copp, and Cuthbertson*, 1943, 147, 749

- , sodium-deficient diet effect, *Orent-Keiles and McCollum*, 1940, 133, 75

- Tissue, calcified, metabolism, blood phosphorus turnover, relation, radioactive phosphorus as indicator, *Manly, Hodge, and Manly*, 1940, 134, 293

Mold: Tissue, chemistry, Bohonos and Peterson, 1943, 149, 295

- See also *Aspergillus*, *Fungus*, *Neurospora*

Monilia albicans: Lipids, *Peck and Hauser*, 1940, 134, 403

Monoiodoacetate: Brain oxidation by, effect, *Bernheim and Bernheim*, 1941, 138, 501

Monoiodoacetic acid: Monosaccharides and sodium chloride, absorption, intestine, effect, *Klinghoffer*, 1939, 126, 201

Monolayer(s): Hydrocarbons, branched chain, *Stenhagen and Stållberg*, 1941, 139, 345
Stållberg and Stenhagen, 1942, 143, 171
Stållberg-Stenhagen and Stenhagen, 1943, 148, 685

Monomethyllysine: α -N-, growth availability, *Gordon*, 1939, 127, 487

Mononucleotide(s): Ribonucleic acid hydrolysis by ribonuclease, crystalline, isolation, *Loring and Carpenter*, 1943, 150, 381

Monosaccharide(s): Absorption, intestine, monoiodoacetic acid effect, *Klinghoffer*, 1938, 126, 201
 Aldo-, benzimidazole derivatives, identification, *Moore and Link*, 1940, 133, 293

Morphine: Cholinesterase, *in vitro*, effect, *Eadie*, 1941, 138, 597

Mosaic: *Aucuba* virus protein, tomato roots, isolation, *Stanley*, 1938, 126, 125

Tobacco, protein, *Martin, Balls, and McKinney*, 1939, 130, 687

—, virus, acetyl derivatives, *Miller and Stanley*, 1941, 141, 905

—, —, amino acids, aromatic, *Knight and Stanley*, 1941, 141, 39

—, —, antiserum and, reaction, electron microscope study, *Anderson and Stanley*, 1941, 139, 339

—, —, carbobenzoxy, *p*-chlorobenzoyl, and benzenesulfonyl derivatives, *Miller and Stanley*, 1942, 146, 331

—, —, cleavage products, *Knight and Laufer*, 1942, 144, 411

—, —, denaturation, *Laufer and Dow*, 1941, 140, 509

Mosaic—continued:

Tobacco, virus, denaturation, measurement by phenolic groups, *Miller*, 1942, 146, 339

—, —, derivatives, *Miller and Stanley*, 1941, 141, 905
 1942, 146, 331
Miller, 1942, 146, 339, 345

—, —, phenolic groups, determination, tyrosine derivatives, relation, *Miller*, 1942, 146, 345

—, —, heat denaturation, *Laufer and Price*, 1940, 133, 1

—, —, intestine nucleophosphatase action, *Cohen and Stanley*, 1942, 142, 863

—, —, nucleic acid molecule, size and shape, *Cohen and Stanley*, 1942, 144, 589

—, —, —, properties and hydrolytic products, *Loring*, 1939, 130, 251

—, —, phenylureido derivatives, *Miller and Stanley*, 1941, 141, 905

—, —, physical and chemical properties, *Knight*, 1942, 145, 11

—, —, protein, amino acids, determination, *Ross*, 1941, 138, 741

—, —, —, acids, fractionation, *Ross*, 1942, 143, 685

—, —, —, solution, diffusion, *Neurath and Saum*, 1938, 126, 435

—, —, —, viscosity, *Laufer*, 1938, 126, 443

—, —, —, sulfur distribution, *Ross*, 1940, 136, 119

—, —, —, viscosimetry, *Frampton*, 1939, 129, 233

—, —, rib-grass strain, sulfur, *Knight*, 1943, 147, 663

Virus, latent, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259

—, —, nucleic acid and protein, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259

—, protein, latent, properties, *Loring*, 1938, 126, 455

—, —, —, ultracentrifugal analysis, *Wyckoff*, 1939, 128, 729

- Mouse:** Antialopecia factor, *Woolley*, 1941, 139, 29
- Dietary essential, *Woolley*, 1940, 136, 113
- Mucilage:** Flaxseed, aldobionic acid structure, *Tipson, Christman, and Levene*, 1939, 128, 609
- Wheat, Indian, *Anderson, Gillette, and Seeley*, 1941, 140, 569
- Mucin(s):** -Hydrolyzing enzyme, bacterial, *Robertson, Ropes, and Bauer*, 1940, 133, 261
- Mucinase:** *Robertson, Ropes, and Bauer*, 1940, 133, 261
- Mucopolysaccharide(s):** Skin, *Meyer and Chaffee*, 1941, 138, 491
- Synovial fluid, isolation, *Meyer, Smyth, and Dawson*, 1939, 128, 319
- Muscle:** Adenylic acid, preparation, *Kerr*, 1941, 139, 131
- Aging effect, *Lowry, Hastings, Hull, and Brown*, 1942, 143, 271
- Alkalosis effect, *Yannet*, 1940, 136, 265
- Anserine determination, *Zapp and Wilson*, 1938, 126, 9, 19
- , species distribution, *Zapp and Wilson*, 1938, 126, 19
- Bicarbonate ion distribution, *Wallace and Hastings*, 1942, 144, 637
- Blood and, electrolyte and water exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- plasma and, electrolyte and water exchange, *Mellors, Muntwyler, and Mautz*, 1942, 144, 773
- Calcium distribution, *Eichelberger and McLean*, 1942, 142, 467
- Carbohydrate metabolism *in vitro*, *Stadie and Zapp*, 1943, 148, 669
- Carbon dioxide equilibria *in vitro*, *Wallace and Lowry*, 1942, 144, 651
- Carbonic acid dissociation constant, first, *Danielson, Chu, and Hastings*, 1939, 131, 243
- Carnosine determination, *Zapp and Wilson*, 1938, 126, 9, 19
- , species distribution, *Zapp and Wilson*, 1938, 126, 19

Muscle—continued:

- Cations, potassium-low diet and des-oxy corticosterone effect, *Hegnauer*, 1943, 150, 353
- Chloride determination, *Dean*, 1941, 137, 113
- , vitamin E deficiency, α -tocopherol effect, *Houchin and Mattill*, 1942, 146, 301
- Cholesterol, inheritance and exercise effect, *Bloor*, 1940, 132, 77
- Coenzyme I, nicotinic acid deficiency effect, *Azelrod, Spies, and Elvehjem*, 1941, 138, 667
- Creatine, *Myers and Mangun*, 1940, 132, 701
- Corsaro, Mangun, and Myers*, 1940, 135, 407
- Mangun and Myers*, 1940, 135, 411
- , vitamin E deficiency, α -tocopherol effect, *Houchin and Mattill*, 1942, 146, 301
- Denervated, phospholipid metabolism, *Artom*, 1941, 139, 953
- Dystrophy, nutritional, muscle phosphorus, *Goettsch, Lonstein, and Hutchinson*, 1939, 128, 9
- , α -tocopherol phosphate effect, *Houchin and Mattill*, 1942, 146, 309
- , α -tocopherylquinone, relation, *Golumbic and Mattill*, 1940, 135, 339
- Electrolytes, dolphin, *Eichelberger, Geiling, and Vos*, 1940, 133, 661
- , extracellular, depletion effect, *Yannet and Darrow*, 1940, 134, 721
- , hydronephrosis, potassium salts, injection effect, *Eichelberger*, 1941, 140, 467
- Esterase, *Matlack and Tucker*, 1940, 132, 663
- Extract, enzyme, phosphorylating, *Cori, Colowick, and Cori*, 1939, 127, 771
- Glycogen, age and fasting effect, *Heymann and Modic*, 1939, 131, 297
- , resynthesis, exercise effect, *Flock and Bollman*, 1940, 136, 469
- Growth retardation effect, *Lowry, McCay, Hastings, and Brown*, 1942, 143, 281

Muscle—continued:

- Heart, aging effect, *Lowry, Hastings, Hull, and Brown*, 1942, 143, 271
 —, creatine, phosphorus, and potassium, *Mangun and Myers*, 1940, 135, 411
 —, electrolytes, extracellular, depletion effect, *Yannet and Darrow*, 1940, 134, 721
 Lactic acid formation, work effect, *Flock, Ingle, and Bollman*, 1939, 129, 99
 — — metabolism *in vitro*, *Stadie and Zapp*, 1943, 148, 669
 Lipids, *Artom and Fishman*, 1943, 148, 405
 Magnesium distribution, *Eichelberger and McLean*, 1942, 142, 467
 Octopus, nitrogenous extractives, *Irvin and Wilson*, 1939, 127, 565
 Oxidation, insulin effect, *Stadie, Zapp, and Lukens*, 1940, 132, 411
 —, α -tocopherol and phosphate derivative, *in vitro*, effect, *Houchin*, 1942, 146, 313
 Oxygen consumption, vitamin E deficiency, α -tocopherol effect, *Houchin and Mattill*, 1942, 146, 301
 Phosphocreatine and inorganic phosphate, radioactive phosphorus in study, *Bollman and Flock*, 1943, 147, 155
 Phospholipid, inheritance and exercise effect, *Bloor*, 1940, 132, 77
 Phosphorus, *Myers and Mangun*, 1940, 132, 701
 Mangun and Myers, 1940, 135, 411
 —, muscle dystrophy, nutritional, *Goettsch, Lonstein, and Hutchinson*, 1939, 128, 9
 Phosphorylase, crystalline, *Green, Cori, and Cori*, 1942, 142, 447
 —, —, polysaccharide synthesis, relation, *Hassid, Cori, and McCready*, 1943, 148, 89
 Phosphorylations, potassium rôle, *Boyer, Lardy, and Phillips*, 1942, 146, 673
 Potassium, *Myers and Mangun*, 1940, 132, 701
 Mangun and Myers, 1940, 135, 411

Muscle—continued:

- Potassium, extracellular fluid and sodium, depletion, effect, *Miller*, 1943, 147, 121
 —, frog, *Steinbach*, 1940, 133, 695
 Respiration, citric acid cycle, *Stare, Lipton, and Goldinger*, 1941, 141, 981
 —, insulin effect, *Stare and Baumann*, 1940, 133, 453
 Scallop, octopine precursor, *Irvin and Wilson*, 1939, 127, 575
 Seal, metabolism, diving effect, *Scholander, Irving, and Grinnell*, 1942, 142, 431
 Sodium, frog, *Steinbach*, 1940, 133, 695
 Squid, nitrogenous extractives, *Irvin and Wilson*, 1939, 127, 565
 Tocopherols, determination, chemical, *Devlin and Mattill*, 1942, 146, 123
 Hines and Mattill, 1943, 149, 549
 Water, dolphin, *Eichelberger, Geiling, and Vos*, 1940, 133, 661
 —, hydronephrosis, potassium salts, injection effect, *Eichelberger*, 1941, 140, 467
 —, potassium salts, injection effect, *Eichelberger*, 1941, 138, 583
 —, renal impairment influence, *Eichelberger*, 1939, 128, 137
 Working, pyruvate, vitamin B₁ effect, *Bollman and Flock*, 1939, 130, 565
See also Exercise, Heart, Work
 Mussel: Sea, carotenoid pigments, metabolism, *Scheer*, 1940, 136, 275
 Mycobacterium: Benzoic acid and related substances, oxidation, *Bernheim*, 1942, 143, 333
 Mycolic acid: Phlei-, tubercle bacillus, *Peck and Anderson*, 1941, 140, 89
 Tubercle bacillus, *Lesuk and Anderson*, 1940, 136, 603
 — —, avian, wax, *Anderson and Creighton*, 1939, 129, 57
 — —, isolation and properties, *Stodola, Lesuk, and Anderson*, 1938, 126, 505
 Myelination: Brain lipid metabolism, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 297

Myelination—continued:

- Brain lipids, deposition and metabolism, effect, *Waelsch, Sperry, and Stoyanoff*, 1941, 140, 885
- Myase P: Pantothenic acid determination, microbiological, use in, *Buskirk and Delor*, 1942, 145, 707
- Myoglobin: Metmyoglobin-, system, oxidation-reduction potentials, *Taylor and Morgan*, 1942, 144, 15
- Myokinase: *Kalckar*, 1942, 143, 299
- Adenine nucleotides, action, *Kalckar*, 1943, 148, 127
- Transphosphorylations, rôle, *Colowick and Kalckar*, 1943, 148, 117
- Kalckar*, 1943, 148, 127
- Myosin: Denaturing agents, effect, *Greenstein and Edsall*, 1940, 133, 397
- Edsall and Mehl*, 1940, 133, 409
- Sulphydryl groups, determination, porphyrindin titration, *Greenstein and Edsall*, 1940, 133, 397
- Viscosity and double refraction of flow, *Edsall and Mehl*, 1940, 133, 409
- Mytilus californianus*: See *Mussel*

N

- Napelline: *Craig and Jacobs*, 1942, 143, 611
- Naphthalene(s): Chlorinated, metabolism, *Cleary, Maier, and Hitchings*, 1939, 127, 403
- Growth relation, *Stekol*, 1939, 127, 131
- Naphthalene- β -sulfonic acid: Amino acid reagent, *Bergmann and Stein*, 1939, 129, 609
- Naphthol: 4-Amino-2-methyl-, sulphydryl groups, oxidation, effect, *Bernheim and Bernheim*, 1940, 134, 457
- 4-Amino-2-methyl-1-, and 4-amino-3-methyl-1-, vitamin K activity, *Emmett, Kamm, and Sharp*, 1940, 133, 285
- Naphthoquinone(s): 2-Methyl-1,4-, antihemorrhagic activity, *Almquist and Klose*, 1939, 130, 787

Naphthoquinone(s)—continued:

- 2-Methyl-1,4-, blood and blood plasma reactions, *Scudi and Buhs*, 1942, 144, 599
- , 3,3'-methylenebis(4-hydroxycoumarin) action and prothrombin time, effect, *Overman, Stahmann, and Link*, 1942, 145, 155
- , vitamin K₁, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm*, 1940, 132, 467
- Vitamin K₁-associated, determination, reduction-oxidation method, *Trenner and Bacher*, 1941, 137, 745
- Necturus: Urine, glomerulus, sodium, *Bott*, 1943, 147, 653
- Negro: Blood, climate and season effect, *Dill, Wilson, Hall, and Robinson*, 1940, 136, 449
- Neoplasm: Epithelial, cytochrome c and body mass, relation, *Rosenthal and Drabkin*, 1943, 150, 131
- Phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
- See also Carcinoma, Lymphoma, Lymphosarcoma, Sarcoma, Tumor
- Nephrectomy: Acetone bodies, utilization, feeding and glucose, effect, *Mirsky, Nelson, and Grayman*, 1939, 130, 179
- Body water and electrolyte distribution, dehydration and hydration, effect, *Chanutin and Ludevig*, 1939, 131, 519
- Calciferol effect, *Tweedy, Templeton, Patras, McJunkin, and McNamara*, 1939, 128, 407
- Creatine and creatinine excretion, intestinal, and decomposition, effect, *Bodansky, Duff, and McKinney*, 1941, 140, 365
- Liver creatine formation from glycocyamine, effect, *Bodansky, Duff, and McKinney*, 1941, 140, 365
- Nephritis: Kidney oxidations and carbohydrate synthesis, *Lyman and Bar-ron*, 1940, 132, 293

- Nerve:** Phospholipid, formation *in vitro*, radioactive phosphorus as indicator, *Fries, Schachner, and Chaikoff*, 1942, 144, 59
- Tissue,** cerebrosides, determination, micro-, *Edman*, 1942, 143, 219
- Neurospora:** Mutant, choline determination, use, *Horowitz and Beadle*, 1943, 150, 325
- Pyridoxine** determination, use, *Stokes, Larsen, Woodward, and Foster*, 1943, 150, 17
- Nicotinamide:** Bacteria, metabolism, rôle, *Saunders, Dorfman, and Koser*, 1941, 138, 69
- Blood,** determination, bacterial, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- Containing nitrilites, *Hemophilus parainfluenzae*, *Schlenk and Gingrich*, 1942, 143, 295
- Cozymase** synthesis, blood cell, red, effect, *Handler and Kohn*, 1943, 150, 447
- Growth,** effect, *Handler and Dann*, 1942, 146, 357
- Like substance, asparagine-glutamic acid mixtures, determination, *Bovarnick*, 1943, 149, 301
- N¹-Methyl-**, determination, *Huff and Perlzweig*, 1943, 150, 483
- , urine, *Huff and Perlzweig*, 1943, 150, 395
- Methylation,** liver, *in vitro*, *Perlzweig, Bernheim, and Bernheim*, 1943, 150, 401
- Nucleotides,** carbohydrate group, identification, *Schlenk*, 1942, 146, 619
- Related compounds, bacteria, metabolism, rôle, *Saunders, Dorfman, and Koser*, 1941, 138, 69
- substances, blood, urine, and spinal fluid, determination, bacterial, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- Spinal fluid,** determination, bacterial, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- Nicotinamide—continued:**
- Urine,** determination, bacterial, *Isbell, Wooley, Butler, and Sebrell*, 1941, 139, 499
- See also* Factor V
- Nicotine:** Urine, determination, *Corcoran, Helmer, and Page*, 1939, 129, 89
- Nicotinic acid:** Biological materials, determination, colorimetric, *Melnick and Field*, 1940, 134, 1
- Blood cell,** red, coenzyme I, deficiency effect, *Axelrod, Spies, and Elvehjem*, 1941, 138, 667
- cells, determination, *Klein, Perlzweig, and Handler*, 1942, 145, 27
- , determination, enzymatic, *Allinson*, 1943, 147, 785
- , factors affecting, *Melnick, Robinson, and Field*, 1940, 136, 157
- , mammals, *Pearson*, 1939, 129, 491
- plasma, determination, *Klein, Perlzweig, and Handler*, 1942, 145, 27
- Chick embryo,** synthesis, *Dann and Handler*, 1941, 140, 935
- Coenzyme I,** tissue, effect, *Axelrod, Madden, and Elvehjem*, 1939, 131, 85
- Cozymase** synthesis from, blood cell, red, effect, *Kohn and Klein*, 1939, 130, 1
- Handler and Kohn*, 1943, 150, 447
- Deficiency,** *Schaefer, McKibbin, and Elvehjem*, 1942, 144, 679
- , biochemical defect, *Handler and Dann*, 1942, 145, 145
- , chick, *Briggs, Luckey, Teply, Elvehjem, and Hart*, 1943, 148, 517
- Derivatives,** urine, determination, *Perlzweig, Levy, and Sarett*, 1940, 136, 729
- , —, excretion, *Melnick, Robinson, and Field*, 1940, 136, 145
- Determination,** *Martinek, Kirch, and Webster*, 1943, 149, 245
- , chemical, *Melnick and Field*, 1940, 135, 53
- , digestion mixtures, decolorization in, *Friedemann and Barborka*, 1941, 138, 785

Nicotinic acid—continued:

- Determination, microbiological, *Snell and Wright*, 1941, 139, 675
- , —, *p*-aminobenzoic acid effect, *Isbell*, 1942, 144, 567
- Factor V synthesis from, blood cell, red, effect, *Kohn and Klein*, 1939, 130, 1
- — — —, *in vitro*, blood cell, red, effect, *Kohn and Klein*, 1940, 135, 685
- Feeds, *Hale, Davis, and Baldwin*, 1942, 146, 555
- Metabolism, *Huff and Perlzweig*, 1942, 142, 401
- Metabolite, urine, *Huff and Perlzweig*, 1943, 150, 395
- N-Methyl derivatives, urine, determination, *Sarett*, 1943, 150, 159
- Milk and milk derivatives, determination, chemical, *Noll and Jensen*, 1941, 140, 755
- Muscle coenzyme I, deficiency effect, *Axelrod, Spies, and Elvehjem*, 1941, 138, 667
- Plant, determination, chemical, *Hale, Davis, and Baldwin*, 1942, 146, 553
- Pneumococcus growth factor, *Rane and Subbarow*, 1940, 134, 455
- Polarographic study, *Tompkins and Schmidt*, 1942, 143, 643
- Pyridine nucleotides, synthesis from, *in vitro*, blood cell, red, effect, *Kohn and Klein*, 1940, 135, 685
- Related compounds, polarographic study, *Tompkins and Schmidt*, 1942, 143, 643
- Synthesis, rat, *Dann and Kohn*, 1940, 136, 435
- *Dann*, 1941, 141, 803
- *Huff and Perlzweig*, 1942, 142, 401
- Tissue, *Handler and Dann*, 1941, 140, 739
- , determination, *Dann and Handler*, 1941, 140, 201
- Urine, determination, *Bandier and Hald* method, *Rosenblum and Jolliffe*, 1940, 134, 137
- excretion, *Melnick, Robinson, and Field*, 1940, 136, 145

Nicotinic acid—continued:

- Urine excretion, factors influencing, *Melnick, Robinson, and Field*, 1940, 136, 131
- thiamine determination, thiochrome method, ingestion effect, *Mason and Williams*, 1941, 140, 417
- See also Factor V
- Nicotinuric acid: Synthesis, *Fox and Field*, 1943, 147, 651
- Niemann-Pick disease: Spleen, *Chargaff*, 1939, 130, 503
- Ninhydrin: Ascorbic acid and, reaction, *West and Rinehart*, 1942, 146, 105
- Endiol compounds and, reaction, *West and Rinehart*, 1942, 146, 105
- Ureide, synthesis and properties, *Van Slyke and Hamilton*, 1943, 150, 471
- Nitrate(s): Determination, micro-, *Borsock and Dubnoff*, 1939, 131, 163
- Nitrobenzoic acid: *p*-, blood, determination, *Eckert*, 1943, 148, 197
- Nitrogen: Amino. See Amino nitrogen
- Amino acid, blood plasma, *Cramer and Winnick*, 1943, 150, 259
- Ammonia, tobacco plant, assimilation, nitrogen isotope in study, *Vickery, Pucher, Schoenheimer, and Rittenberg*, 1940, 135, 531
- Blood, determination, gasometric, micro, *Edwards, Scholander, and Roughton*, 1943, 148, 565
- serum, arthropods, *Allison and Cole*, 1940, 135, 259
- Buckwheat leaf, metabolism, *Vickery, Pucher, Schoenheimer, and Rittenberg*, 1939, 129, 791
- Chick embryo, *Levy and Palmer*, 1940, 136, 415
- Determination, iodometric, micro-, *Levy and Palmer*, 1940, 136, 57
- See also Kjeldahl method
- Dietary, antibody protein, immunity, effect, *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*, 1942, 144, 555
- — —, immunized animals, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 1942, 144, 545

Nitrogen—continued:

- Dietary, blood proteins, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberg*, 1942, 144, 541
- Excretion, pituitary, anterior, extract, and iodine, effect, *Gaebler and Bartlett*, 1939, 129, 559
- Fixation, biological, mechanism, *Wilson, Lee, and Wilson*, 1942, 144, 265
- Lee, Wilson, and Wilson*, 1942, 144, 273
- , detection, isotopic nitrogen in study, *Burris, Eppling, Wahlin, and Wilson*, 1943, 148, 349
- , symbiotic, hydrogen effect, *Wilson, Lee, and Wyss*, 1941, 139, 91
- , —, hydrogenase and, *Wilson, Burris, and Coffee*, 1943, 147, 475
- , —, mechanism, *Wilson, Lee, and Wyss*, 1941, 139, 91
- Heavy, *d*-lysine metabolism, study with, *Ratner, Weissman, and Schoenheimer*, 1943, 147, 549
- , *l*(+)-lysine stability, study with, *Weissman and Schoenheimer*, 1941, 140, 779
- Isotope, creatine-creatinine metabolism, study with, *Bloch and Schoenheimer*, 1939, 131, 111
- , hippuric acid formation, use, *Rittenberg and Schoenheimer*, 1939, 127, 329
- , *d*-phenylaminobutyric acid inversion and *l*-phenylaminobutyric acid acetylation, use in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 1939, 131, 273
- Isotopes, amino acids, *Schoenheimer and Rittenberg*, 1939, 127, 285
- , organic compounds, determination, *Rittenberg, Keston, Rosebury, and Schoenheimer*, 1939, 127, 291
- Isotopic, amino acids, synthesis with, *Schoenheimer and Ratner*, 1939, 127, 301
- , *Azotobacter vinelandii*, distribution, *Burris*, 1942, 143, 509
- Metabolism, anaphylactic shock, relation, *Miller*, 1940, 133, 93

Nitrogen—continued:

- Metabolism, yeast, ammonia and carbamide effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- , —, bios effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- Milk, distribution, *Beach, Bernstein, Hoffman, Teague, and Macy*, 1941, 139, 57
- Proteins, denaturation effect, *Hendrix and Dennis*, 1938, 126, 315
- Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
- Stability, organic compounds, *Keston, Rittenberg, and Schoenheimer*, 1939, 127, 315
- Total, determination, diffusion method, *Tompkins and Kirk*, 1942, 142, 477
- , —, micro-, *Borsook and Dubnoff*, 1939, 131, 163
- Urea, blood, determination, *Genitzkow*, 1942, 143, 531
- , determination, micro-, *Bock*, 1941, 140, 519
- Nitrogenous base(s): Cobalt and manganese mesoporphyrins, coordination, *Taylor*, 1940, 135, 569
- Iron coproporphyrins and etioporphyrins, coordination, *Vestling*, 1940, 135, 623
- mesoporphyrin, protoporphyrin, and hematoporphyrin, coordination, *Davies*, 1940, 135, 597
- Metalloporphyrins, coordination, *Clark, Taylor, Davies, and Vestling*, 1940, 135, 543
- Nitrogenous constituent(s): Cephalin, *Bliz*, 1941, 139, 471
- Tissue phosphatides, *Chargaff, Ziff, and Rittenberg*, 1942, 144, 343
- Nitrogenous extractive(s): Squid and octopus muscle, *Irvin and Wilson*, 1939, 127, 565
- Nitrous oxide: Blood, solubility, *Cullen and Cook*, 1943, 147, 23
- Nitzschia closterium*: Pigments, *Pace*, 1941, 140, 483
- Nomogram: Protein properties, *Wyman and Ingalls*, 1943, 147, 297
- See also Alignment chart

- Nonanoic acid:** 4-Methyl-, 2-methyl-heptanoic acid, configurational relationship, *Levene and Kuna*, 1941, 140, 255
- Notatin:** *Birkinshaw and Raistrick*, 1943, 148, 459
- See also Penicillin
- Nuclease:** Ribo-, crystalline, ribonucleic acid, action, *Allen and Eiler*, 1941, 137, 757
- , —, — — hydrolysis by, mononucleotides, isolation, *Loring and Carpenter*, 1943, 150, 381
- Nucleic acid(s):** Desoxyribo-, enzyme dephosphorylation, *Schmidt, Pickels, and Levene*, 1939, 127, 251
- , structure, *Levene*, 1938, 126, 63
- Mosaic virus, latent, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
- Pentose identification and determination, *Gurin and Hood*, 1941, 139, 775
- Ribo-, hydrolysis, enzymatic, chemical constitution, relation, *Bolomey and Allen*, 1942, 144, 113
- , mononucleotides from, hydrolysis by ribonuclease, crystalline, *Loring and Carpenter*, 1943, 150, 381
- , nucleotides, union, *Tipson and Levene*, 1939, 127, 105
- , ribonuclease, crystalline, action, *Allen and Eiler*, 1941, 137, 757
- Ribose, electrophoretic mobilities, *Cohen*, 1942, 146, 471
- Ring spot virus, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
- Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
- Streptococcus pyogenes*, *Sevag, Smolens, and Lackman*, 1940, 134, 523
- Tobacco mosaic virus, molecular size and shape, *Cohen and Stanley*, 1942, 144, 589
- — —, properties and hydrolytic products, *Loring*, 1939, 130, 251
- Tuberculin, isolation, electrophoretic, *Seibert and Watson*, 1941, 140, 55
- protein, removal, *Seibert*, 1940, 133, 593
- Nucleophosphatase:** Intestine, tobacco mosaic virus, action, *Cohen and Stanley*, 1942, 142, 863
- Nucleoprotein(s):** Blood cell, red, phosphorus exchange, *Rapoport, Leva, and Guest*, 1941, 139, 633
- Pentose identification and determination, *Gurin and Hood*, 1941, 139, 775
- Streptococcal, conjugation, *Sevag and Smolens*, 1941, 140, 833
- Tissue nuclei and, dye reaction, comparison, *Kelley*, 1939, 127, 55
- Nucleoside(s):** Purine, blood and tissues, determination, *Kerr*, 1940, 132, 147
- Nucleotide(s):** Adenine, crystalline, isolation, *Buell*, 1943, 150, 389
- , myokinase action, *Kalchar*, 1943, 148, 127
- Diphosphopyridine, betaine aldehyde oxidation, effect, *Klein and Handler*, 1942, 144, 537
- , determination, manometric, *Jandorf, Klemperer, and Hastings*, 1941, 138, 311
- , *Fusarium* fermentation, alcoholic, *in vivo*, *Gould, Tytell, and Jaffe*, 1942, 146, 219
- , isolation, *Jandorf*, 1941, 138, 305
- , reduced, oxidation, milk flavo-protein action, *Ball and Ramsdell*, 1939, 131, 767
- , stability, tissue, *Jandorf*, 1943, 150, 89
- , synthesis, *Chilomonas paramecium*, *Hutchens, Jandorf, and Hastings*, 1941, 138, 321
- Lactobacillus casei* growth essential, isolation, *Stokstad*, 1941, 139, 475
- Mono-, ribonucleic acid hydrolysis by ribonuclease, crystalline, isolation, *Loring and Carpenter*, 1943, 150, 381
- Nicotinamide, carbohydrate group, identification, *Schlenk*, 1942, 146, 619
- Purine, blood and tissues, determination, *Kerr*, 1940, 132, 147
- Pyridine, synthesis from nicotinic acid, *in vitro*, blood cell, red, effect, *Kohn and Klein*, 1940, 135, 685

Nucleotide(s)—continued:

Pyridine, tissue inactivation, *in vitro*,
Handler and Klein, 1942, 143, 49
 1942, 144, 453

—, yeast, preparation, *Klein*,
 1940, 134, 43

Ribonucleic acid, union, *Tipson and Levene*,
 1939, 127, 105

Triphosphopyridine, determination,
 micro-, *Haas, Harrer, and Hogness*,
 1942, 142, 835

Nucleus: Lipids, Stoneburg,

1939, 129, 189

Liver, isolated, enzymes, *Dounce*,
 1943, 147, 685

Proteins, *Mayer and Gulick*,
 1942, 146, 433

Tissue, basic dye combination, *Kelley*,
 1939, 127, 73

—, nucleoproteins and, dye reaction,
 comparison, *Kelley*, 1939, 127, 55
See also Cell

Nutrition: Amino acids, rôle, *Rose, Haines, and Johnson*,

1942, 146, 683

Rose, Haines, Johnson, and Warner,
 1943, 148, 457

Body calcium, effect, *Lanford, Campbell, and Sherman*, 1941, 137, 627

Factor, additional, rat, *Oleson, Bird, Elvehjem, and Hart*, 1939, 127, 23

Feather pigmentation factor, *McGinnis, Norris, and Heuser*,
 1942, 145, 341

Lipid metabolism, relation, *Entenman, Changus, Gibbs, and Chaikoff*,
 1940, 134, 59

Entenman and Chaikoff,
 1942, 142, 129

See also Diet, Overnutrition, Under-nutrition

Nutritional status: *Golden and Garfinkel*,

1942, 144, 447

O

Oak: Silk, flowers, β -carotene source,
Zechmeister and Polgár,

1941, 140, 1

Oat(s): *Araban, Morris*, 1942, 142, 881

Oat(s)—continued:

Germinating, transamination and protein synthesis, *Albaum and Cohen*,
 1943, 149, 19

Lichenin, *Morris*, 1942, 142, 881

Obituary: *Cullen, Glenn Ernest, Van Slyke*, 1940, 134, preceding p. 467

Levene, Phoebus Aaron Theodor, Jacobs and Van Slyke,
 1941, 141, 1

Meigs, Edward Browning, Howe,
 1942, 142, 1

Rose, Mary Swartz, Sherman,
 1941, 140, 687

Octopine: *Irvin and Wilson*,

1939, 127, 555, 565, 575

Scallop muscle, precursor, *Irvin and Wilson*, 1939, 127, 575

Synthesis and titration curve, *Irvin and Wilson*, 1939, 127, 555

Octopus: Muscle, nitrogenous extrac-tives, *Irvin and Wilson*,
 1939, 127, 565

Odocoileus virginianus borealis: *See Deer*

Oil(s): Absorption, phosphorus metabo-lism, effect, *Reiser*, 1940, 135, 303

Grasshopper egg, protyrosinase acti-vators, unimolecular films and frac-tions, *Allen, Boyd, and Bodine*,
 1942, 143, 785

See also Coconut oil, Cod liver oil, Corn oil, Fish liver oils, Olive oil

Oleic acid: Fat depot relation, *Longe-necker*, 1939, 129, 13

Olein: Tri-, preparation, properties, and thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando*,
 1940, 132, 687

Olive oil: Liver phosphorus, acid-soluble, distribution, fasting, effect, *Rapo-port, Leva, and Guest*, 1943, 149, 65

Optical rotation: Protein hydrolysis study, *Winnick and Greenberg*,
 1941, 137, 429

Orange: Juice, calcium assimilation, effect, *Lanford*, 1939, 130, 87

Organ(s): Protein metabolism, preg-nancy and lactation, *Poo, Lew, and Addis*, 1939, 128, 69

- Organic acid(s):** *Bryophyllum calycinum* leaves, *Pucher*, 1942, 145, 511
 Rhubarb leaf, excised, behavior during culture, *Pucher*, *Wakeman*, and *Vickery*, 1938, 126, 43
 Silver salts, bromoacetyl sugars, action, *Tipson*, 1939, 130, 55
- Organic compound(s):** Identification, small amounts, distribution studies, *Craig*, 1943, 150, 33
 Nitrogen isotopes, determination, *Rittenberg*, *Keston*, *Rosebury*, and *Schoenheimer*, 1939, 127, 291
 — stability, *Keston*, *Rittenberg*, and *Schoenheimer*, 1939, 127, 315
 Vitamin C synthesis and excretion, feeding effect, *Longenecker*, *Musulin*, *Tully*, and *King*, 1939, 129, 445
 — —, effect, *Longenecker*, *Fricke*, and *King*, 1940, 135, 497
- Organic material:** Isotopes, radioactive, determination, *Chargaff*, 1939, 128, 579
- Ornithine:** *Dakin*, 1942, 146, 237
 Arginine, conversion, *Glutton*, *Schoenheimer*, and *Rittenberg*, 1940, 132, 227
- Cycle, citrulline relation,** *Gornall* and *Hunter*, 1943, 147, 593
 Proline and glutamic acid, conversion, biological, *Roloff*, *Ratner*, and *Schoenheimer*, 1940, 136, 561
- Orthoptera:** Ontogenesis, enzymes, rôle, *Allen*, *Boyd*, and *Bodine*, 1942, 143, 785
- Osmotic pressure:** Low, determination, apparatus, *Bourdillon*, 1939, 127, 617
- Ovariectomy:** -Hysterectomy, α -estradiol conversion to estrone and β -estradiol, effect, *Fish* and *Dorfman*, 1942, 143, 15
- Urine androgenic substances,** effect, *Hirschmann*, 1939, 130, 421
 — steroids, effect, *Hirschmann*, 1940, 136, 483
- Ovary:** Estrogen, ketonic, *Westerfeld*, *Thayer*, *MacCorquodale*, and *Doisy*, 1938, 126, 181
- Overnutrition:** Blood lipids, effect, *Entenman* and *Chaikoff*, 1942, 142, 129
- Oxalacetate:** Carbon dioxide fixation, enzymatic, *Krampitz*, *Wood*, and *Werkman*, 1943, 147, 243
- Oxalic acid:** Determination, *Sendroy*, 1942, 144, 243
 Fate, *Adolph* and *Liang*, 1942, 146, 497
- Oxidase:** Amine, inactivation, catechol and adrenalin derivatives, effect, *Friedenwald* and *Herrmann*, 1942, 146, 411
 —, inhibitor specificity, *Heegaard* and *Alles*, 1943, 147, 505
 —, substrate specificity, *Alles* and *Heegaard*, 1943, 147, 487
d-Amino acid, *l*-alanine preparation, use, *Behrens*, 1941, 141, 465
 — —, amino acids and, equilibrium relation, *Stadie* and *Zapp*, 1943, 150, 165
 — —, benzoic acid effect, *Klein* and *Kamin*, 1941, 138, 507
 — —, liver, thyroid feeding effect, *Klein*, 1939, 131, 139
 — —, specificity, *Klein* and *Handler*, 1941, 139, 103
 — —, tissue, riboflavin deficiency effect, *Azelrod*, *Sober*, and *Elvehjem*, 1940, 134, 749
- l*-Amino acid, tissue, *Green*, *Nocito*, and *Ratner*, 1943, 148, 461
- Carotene,** carotene and fat oxidation, effect, *Sumner* and *Sumner*, 1940, 134, 531
- Choline,** liver, fatty acid action, *Bernheim*, 1940, 133, 291
 —, livers, fatty, *Handler* and *Bernheim*, 1942, 144, 401
- Copper-protein,** properties, *McCarthy*, *Green*, and *King*, 1939, 128, 455
- Cytochrome.** See **Cytochrome, oxidase**
- Dopa,** mammalian, tyrosinase relation, *Hogeboom* and *Adams*, 1942, 145, 273
- Glycolic acid,** *Dohan*, 1940, 135, 793
- Lipid,** *Sumner*, 1942, 146, 211, 215

Oxidase—continued:

- Per-, *p*-cresol oxidation, *Westerfeld and Lowe*, 1942, 145, 463
- Polyphenol-, kidney extracts, cell-free, properties, *Cadden and Dill*, 1942, 143, 105
- Sarcosine, *Bernheim and Bernheim*, 1942, 143, 391
- Succin-. See Succinoxidase
- Xanthine, blood, *Blauch, Koch, and Hanke*, 1939, 130, 471
- , liver, riboflavin, effect, *Azelrod and Elvehjem*, 1941, 140, 725
- , purification and properties, *Ball*, 1939, 128, 51
- Oxidation(s):** Biological, *Barron and Lyman*, 1939, 127, 143
- Lyman and Barron*, 1940, 132, 293
- Barron*, 1940, 133, 51
- Barron and Friedemann*, 1941, 137, 593
- Barron and Lyman*, 1941, 141, 951
- Barron, Lyman, Lipton, and Goldinger*, 1941, 141, 957
- Barron, Goldinger, Lipton, and Lyman*, 1941, 141, 975
- Stare, Lipton, and Goldinger*, 1941, 141, 981
- Kidney, nephritic, *Lyman and Barron*, 1940, 132, 293
- Oxidation-reduction:** Potentials, determination, dropping mercury electrode, *Müller*, 1942, 145, 425
- Oxodelphinine:** *Jacobs and Craig*, 1939, 128, 431
- Oxonitine:** Chemical constitution, *Jacobs, Elderfield, and Craig*, 1939, 128, 439
- Oxygen:** Blood, determination, gasometric, micro, *Roughton and Scholander*, 1943, 148, 541
- , influence, *Cohn, Tannenbaum, Thalhimer, and Hastings*, 1939, 128, 109
- , saturation determination, colorimetric, micro-, *Lowry, Smith, and Cohen*, 1942, 146, 519
- , —, spectroscopic, *Hall*, 1939, 130, 573

Oxygen—continued:

- Body fluids, determination, micro-, polarographic, *Beecher, Follansbee, Murphy, and Craig*, 1942, 146, 197
- Carbon monoxide-, bone marrow, Pasteur effect, study by, *Warren and Carter*, 1943, 150, 267
- Cholesterol solutions, colloidal, effect, *Wintersteiner and Bergström*, 1941, 137, 785
- Consumption, histamine-histaminase reaction, *Laskowski*, 1942, 145, 457
- , muscle, vitamin E deficiency, α -tocopherol effect, *Houchin and Mattill*, 1942, 146, 301
- Hemin and hemoglobin destruction, effect, *Haurowitz, Schwerin, and Yenson*, 1941, 140, 353
- Hemoglobin-, equilibrium, *Altschul and Hogness*, 1939, 129, 315
- Hemoglobin equilibrium, urea solution, *Taylor and Hastings*, 1942, 144, 1
- Uptake, brain, *Elliott and Libet*, 1942, 143, 227
- , hemoglobin, dried, *Hisey and Morrison*, 1939, 130, 763
- , liver, lead acetate effect, *Baernstein and Grand*, 1941, 140, 285
- , tissue, vitamin deficiency, *Sure and DeWitt*, 1938, 126, 287
- Oxyhemoglobin:** Determination, micro-, *Evelyn and Malloy*, 1938, 126, 655
- Pancreatic digestion, *Ross*, 1939, 127, 169
- Titration data, analysis, *Wyman*, 1939, 127, 1
- Oxyphenazine:** α -, polarographic study, *Müller*, 1942, 145, 425
- Oxytocic hormone:** See Pituitary

P

- Palmitic acid:** Fatty acid synthesis and storage, effect, *Visscher and Corley*, 1943, 147, 291
- Formation rate, body, *Bernhard and Schoenheimer*, 1940, 133, 713
- Stearic and palmitoleic acids, conversion, *Stetten and Schoenheimer*, 1940, 133, 329

- Palmitoleic acid:** Palmitic acid conversion, *Stetten and Schoenheimer*, 1940, 133, 329
- Pancreas:** Amylase, *Little and Caldwell*, 1942, 142, 585
1943, 147, 229
- , solubility, organic solvents, *Larsen and Poe*, 1940, 132, 129
- Carboxyhemoglobin digestion, *Ross*, 1939, 127, 169
- Extract, fat synthesis and metabolism, effect, *McHenry and Garin*, 1940, 134, 683
- , —, relation, *Longenecker, Garin, and McHenry*, 1941, 139, 611
- Hemoglobin digestion, *Ross and Turner*, 1941, 139, 603
- Lipase activation, blood serum effect, *Rabinowitch and Wynne*, 1938, 126, 109
- , blood neutral fat, action, *Kelsey*, 1939, 130, 199
- , specificity, lipid analyses, use, *Kelsey*, 1939, 130, 195
- Oxyhemoglobin digestion, *Ross*, 1939, 127, 169
- Secretion, external, lipid metabolism, effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
Entenman, Chaikoff, and Montgomery, 1941, 137, 699
- Pancreatectomy:** Blood lipids, duct ligation and, with insulin, pancreatic juice ingestion effect, *Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
- Livers, fatty, duct ligation and, pancreatic juice ingestion effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
- , —, insulin and, choline relation, *Entenman and Chaikoff*, 1941, 138, 477
- Protein conversion to glucose, effect, *Gray, Ivy, and Cuthbert*, 1939, 128, 173
- Pyruvic acid formation, insulin and, effect, *Bueding, Fazekas, Herrlich, and Himwich*, 1943, 148, 97
- Pancreatectomy—continued:**
- d-Xylulose and l-xylulose metabolism, effect, *Larson, Chambers, Blatherwick, Ewing, and Sawyer*, 1939, 129, 701
- Pancreatic duct:** Blood lipids, ligation and pancreatectomy with insulin, pancreatic juice ingestion effect, *Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
- , —, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329
- , —, effect, *Entenman, Chaikoff, and Montgomery*, 1939, 130, 121
- Liver lipids, ligation, choline effect, *Entenman, Montgomery, and Chaikoff*, 1940, 135, 329
- , —, effect, *Montgomery, Entenman, and Chaikoff*, 1939, 128, 387
- Livers, fatty, ligation, pancreatectomy and, pancreatic juice ingestion effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
- Pancreatic juice:** Bicarbonate source, *Ball, Tucker, Solomon, and Vennesland*, 1941, 140, 119
- Blood lipids, pancreatectomy and duct ligation with insulin, ingestion effect, *Entenman, Chaikoff, and Montgomery*, 1941, 137, 699
- Composition, carbonic anhydrase relation, *Tucker and Ball*, 1941, 139, 71
- Livers, fatty, pancreatectomy and duct ligation, effect, *Montgomery, Entenman, Chaikoff, and Nelson*, 1941, 137, 693
- Secretion, carbonic anhydrase relation, *Tucker and Ball*, 1941, 139, 71
- Pantothenic acid:** Amino acid analogues, *Weinstock, May, Arnold, and Price*, 1940, 135, 343
- Blood, *Wright*, 1943, 147, 261
- , determination, *Stanbery, Snell, and Spies*, 1940, 135, 353
- , glucose administration, effect, *Wright*, 1942, 142, 445
- , Mammalia, *Pearson*, 1941, 140, 423

Pantothenic acid—continued:

- Chick requirement, *Jukes*,
1939, 129, 225
- Constituents, biological responses,
Woolley, 1939, 130, 417
- Deficiency, *Schaefer, McKibbin, and Elvehjem*, 1942, 143, 321
- Determination, *Pennington, Snell, and Williams*, 1940, 135, 213
- , *Lactobacillus casei* use, buffer and glucose effect, *Stokes and Martin*,
1943, 147, 483
- , microbiological, mylase P use,
Buskirk and Delor, 1942, 145, 707
- , *Proteus morganii* use, *Pelczar and Porter*, 1941, 139, 111
- Factor W, relation, *Black, Frost, and Elvehjem*, 1940, 132, 65
- Growth effect, *Snell*, 1941, 139, 975
1941, 141, 121
- Perspiration, *Tennent and Silber*,
1943, 148, 359
- Pneumococcus growth factor, *Rane and Subbarow*, 1940, 134, 455
- Proteus morganii* metabolism, effect,
Dorfman, Berkman, and Koser,
1942, 144, 393
- Pyruvate metabolism, liver, effect,
Pilgrim, Axelrod, and Elvehjem,
1942, 145, 237
- Tissues, chick, diet effect, *Snell, Pennington, and Williams*,
1940, 133, 559
- Urine, *Silber and Unna*,
1942, 142, 623

See also Dermatitis, anti-

Pantothenic acid diphosphate: Woolley,
1940, 134, 461**Papain: Absorption spectrum, Fruton and Lavin**,
1939, 130, 375

Activation, *Fruton and Bergmann*,
1940, 133, 153

Blood serum pseudoglobulin, effect,
Petermann, 1942, 144, 607

Chymo-, papaya latex, *Jansen and Balls*, 1941, 137, 459

Crystalline, isolation and properties,
Balls and Lineweaver,
1939, 130, 669

—, proteins, native and urea-de-natured, action, comparison, *Line-weaver and Hoover*, 1941, 137, 325

Papain—continued:

Crystalline, thyroglobulin denatura-tion, effect, *Lundgren*,
1941, 138, 293

Dehydrogenases, action, *Bernheim*,
1940, 133, 141

Diphtheria antitoxin, effect, *Peter-mann*, 1942, 144, 607

Histamine liberation by, *Rocha e Silva and Andrade*, 1943, 149, 9

Plastein synthesis, insulin digests, effect, *Haddock and Thomas*,
1942, 144, 691

Ultraviolet absorption spectrum,
Darby, 1941, 139, 721

Papaya: Latex, proteinase, crystalline, Jansen and Balls, 1941, 137, 459

Papilloma: Virus protein, molecular size, shape, and homogeneity, Neu-rath, Cooper, Sharp, Taylor, Beard, and Beard, 1941, 140, 293

—, rabbit, electrophoresis, *Sharp, Taylor, Beard, and Beard*,
1942, 142, 193

Paraffin: Metabolism, Stetten,
1943, 147, 327

Paraldehyde: Biological fluids, deter-mination, Levine and Bodansky,
1940, 133, 193

Paralysis: Biotin effect, Nielsen and Elvehjem, 1942, 144, 405

Parathyroid: Hormone, blood and urine, effect, Logan, 1939, 127, 711

—, ketene acetylation, *Wood and Ross*, 1942, 146, 59

—, purification and nature, *Ross and Wood*, 1942, 146, 49

Parathyroidectomy: Thyro-, calciferol effect, Tweedy, Templeton, Patras, McJunkin, and McNamara,
1939, 128, 407

Pasteur enzyme: Retina, spectrum, Stern and Melnick, 1941, 139, 301

Yeast, absorption spectrum, *Melnick*,
1941, 141, 269

Pasteur reaction: Barker, Shorr, and Malam, 1939, 129, 33

Bone marrow, carbon monoxide-oxygen in study, *Warren and Carter*,
1943, 150, 267

Pea: Roots, carboxylase, Horowitz and Heegaard, 1941, 137, 475

- Peanut:** Proteins, threonine, serine, cystine, and methionine, *Brown*, 1942, 142, 299
- Pectic material:** Cottonwood, *Anderson, Kaster, and Seeley*, 1942, 144, 767
- Penicillin:** B, *Penicillium notatum*, *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 1943, 147, 47
- , preparation, purification, and mode of action, *Van Bruggen, Reithel, Cain, Katzman, Doisy, Muir, Roberts, Gaby, Homan, and Jones*, 1943, 148, 365
- Determination, *Foster*, 1942, 144, 285
- Foster and Woodruff*, 1943, 148, 723
- See also Notatin
- Penicillium notatum:** Antibacterial glucose, aerodehydrogenase from, *Birkinshaw and Raistrick*, 1943, 148, 459
- Penicillin B,** *Roberts, Cain, Muir, Reithel, Gaby, Van Bruggen, Homan, Katzman, Jones, and Doisy*, 1943, 147, 47
- Pentamethyl dulcitol:** 1,2,3,5,6-O-, synthesis, *Tipson and Levene*, 1939, 129, 575
- Pentamethyl-d-sorbitol:** 1,2,3,5,6-O-, *Levene and Kuna*, 1939, 127, 49
- Pentose(s):** Brain phospholipid formation *in vitro*, radioactive phosphorus in study, effect, *Schachner, Fries, and Chaikoff*, 1942, 146, 95
- Nucleic acids and nucleoproteins, identification and determination, *Gurin and Hood*, 1941, 139, 775
- Pepsin:** Crystalline, solubility, factors affecting, *Steinhardt*, 1939, 129, 135
- Gastric juice, activity, determination, *Riggs and Stadie*, 1943, 150, 463
- Malonyl, *Tracy and Ross*, 1942, 146, 63
- Pressure effect, *Matthews, Dow, and Anderson*, 1940, 135, 697
- Salmon, crystalline, preparation and properties, *Norris and Elam*, 1940, 134, 443
- , specificity, *Fruton and Bergmann*, 1940, 136, 559
- Specificity, *Fruton and Bergmann*, 1939, 127, 627
- Peptidase(s):** Activation, metal effect, *Berger and Johnson*, 1939, 130, 641
- Amino-, chick embryo, *Levy and Palmer*, 1943, 150, 271
- Carboxy-, kinetics, substrate effect, *Bergmann and Fruton*, 1942, 145, 247
- , specificity, *Hofmann and Bergmann*, 1940, 134, 225
- Di-. See Dipeptidase
- Intestine, manganese effect, *Smith and Bergmann*, 1941, 138, 789
- Leucyl-, malt, cabbage, and spinach, *Berger and Johnson*, 1939, 130, 655
- , occurrence, *Berger and Johnson*, 1940, 133, 157
- Poly-, yeast, isolation and properties, *Johnson*, 1941, 137, 575
- Peptide(s):** *Dunn and Porush*, 1939, 127, 261
- Stoddard and Dunn*, 1942, 142, 329
- Dunn, Frieden, Stoddard, and Brown*, 1942, 144, 487
- Activity, aqueous solutions, *Smith and Smith*, 1940, 135, 273
- Amino acids, dehydrogenated, *Doherty, Tietzman, and Bergmann*, 1943, 147, 617
- Bonds, lactoglobulin, crystalline, determination, *Hotchkiss*, 1939, 131, 387
- , proteins, hydrolysis, catalyzed, *Steinhardt*, 1941, 141, 995
- Cystine, physical chemistry, *Greenstein, Klemperer, and Wyman*, 1939, 129, 681
- d-, hydrolysis, enzyme, *Berger, Johnson, and Baumann*, 1941, 137, 389
- Determination, micro-, *Borsook and Dubnoff*, 1939, 131, 163
- Di-, racemization, acetylation with ketene, *Cahill and Burton*, 1940, 132, 161
- Multivalent, *Greenstein*, 1939, 128, 241
- l-Serine, synthesis, *Fruton*, 1942, 146, 463
- Synthesis, transamination, *Herbst and Shemin*, 1943, 147, 541
- Periodate:** Threonine determination, microdiffusion, use in, *Winnick*, 1942, 142, 461

- Permanganate:** Acid ashing method, blood iodine determination, micro-, *Riggs and Man*, 1940, 134, 193
- Perosis:** Blood and bone phosphatase, chick, *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 1939, 127, 411
- Choline analogues,** effect, *Jukes and Welch*, 1942, 145, 19
- relation, *Jukes*, 1940, 134, 789
- Peroxidase:** *p*-Aminobenzoic acid oxidation, effect, *Lipmann*, 1941, 139, 977
- p*-Cresol oxidation, *Westerfeld and Lowe*, 1942, 145, 463
- Cytochrome c,** *Altschul, Abrams, and Hogness*, 1940, 136, 777
- Abrams, Altschul, and Hogness*, 1942, 142, 303
- Hydrogen peroxide complex, *Abrams, Altschul, and Hogness*, 1942, 142, 303
- Perspiration:** Ascorbic acid, thiamine, riboflavin, and pantothenic acid, *Tennent and Silber*, 1943, 148, 359
- Vitamins,** *Mickelsen and Keys*, 1943, 149, 479
- Phenanthrenequinone:** Condensation, diaminocarboxylic acid from biotin, *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 1942, 145, 503
- Phenanthroline:** *o*-, blood serum iron and pseudohemoglobin iron, determination, use, *Barkan and Walker*, 1940, 135, 37
- , ferrous complex, blood sugar determination, indicator, *MacFadyen and Van Slyke*, 1943, 149, 527
- Phenethylamine:** β -, α -amino- β -methoxy acids, purification, use, *Carter and Risser*, 1941, 139, 255
- Phenol(s):** Blood, determination, ether extraction, *Schmidt*, 1943, 150, 69
- Oxidized, amino acid deamination, action, *Hubard*, 1938, 126, 489
- Substituted, flavoprotein catalysis, effect, *Krahl, Kelich, and Clowes*, 1940, 136, 563
- Urine, determination, *Schmidt*, 1942, 145, 533
- Phenolic group(s):** Tobacco mosaic virus, denaturation measurement by, *Miller*, 1942, 146, 339
- Phenolic group(s)—continued:**
- Tobacco mosaic virus derivatives, determination, tyrosine derivatives, relation, *Miller*, 1942, 146, 345
- Phenolphthalein:** Conjugated, chemical constitution, *Di Somma*, 1940, 133, 277
- Phenol red:** Absorption curve, blood serum proteins, effect, *Robinson and Hogden*, 1941, 137, 239
- Phenothiazone:** Succinic dehydrogenase inhibition, *Collier and Allen*, 1941, 140, 675
- Phenylalanine:** Blood, phenylpyruvic oligophrenia, *Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Chemistry,** *Block and Bolling*, 1939, 129, 1
- Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- Determination,** *Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- dl*-, resolution, asymmetric enzymatic synthesis, *Behrens, Doherty, and Bergmann*, 1940, 136, 61
- Esters,** Raney catalyst, reaction, *Ovakimian, Kuna, and Levene*, 1940, 135, 91
- l*-, preparation, protein hydrolysates, *Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- Metabolism,** *Block and Bolling*, 1939, 129, 1
- Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- , ascorbic acid rôle, *Sealock, Perkinson, and Basinski*, 1941, 140, 153
- Nitration,** *Block and Bolling*, 1939, 129, 1
- Spinal fluid,** phenylpyruvic oligophrenia, *Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Tyrosine conversion,** biological, *Moss and Schoenheimer*, 1940, 135, 415
- Phenylaminoacetic acid:** Esters, Raney catalyst, reaction, *Ovakimian, Kuna, and Levene*, 1940, 135, 91

- Phenylaminobutyric acid:** Acetylation, *in vivo*, *p*-aminobenzoic acid and sulfanilamide relation, *Fishman and Cohn*, 1943, 148, 619
- d*-, inversion, nitrogen and hydrogen isotopes in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 1939, 131, 273
- l*-, acetylation, nitrogen and hydrogen isotopes in study, *du Vigneaud, Cohn, Brown, Irish, Schoenheimer, and Rittenberg*, 1939, 131, 273
- Phenylenediamine:** *o*-, *d*-glucosamine, reaction, *Lohmar and Link*, 1943, 150, 351
- Phenylhydrazine:** Dehydrogenase action, *Bernheim*, 1940, 133, 485
- Phenyllactic acid:** β -, tyrosine, conversion, *Moss*, 1941, 137, 739
- Phenylpyruvic oligophrenia:** Blood and cerebrospinal fluid phenylalanine, *Jervis, Block, Bolling, and Kanze*, 1940, 134, 105
- Metabolism, *Jervis*, 1938, 126, 305
- Tissue protein amino acids, *Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- Phenylthiocarbamide:** Tyrosinase, effect, *Bernheim and Bernheim*, 1942, 145, 213
- Phenylureido derivative(s):** Tobacco mosaic virus, *Miller and Stanley*, 1941, 141, 905
- Phleimycolic acid:** Tubercle bacillus, *Peck and Anderson*, 1941, 140, 89
- Phlorhizin:** Diabetes, phosphorus metabolism, radioactive phosphorus as indicator, *Weissberger*, 1941, 139, 543
- Glycosuria, valine metabolism, *Rose, Johnson, and Haines*, 1942, 145, 679
- Intestine phosphate, organic, and fructose, effect, *Beck*, 1942, 143, 403
- Protein conversion to glucose, effect, *Gray, Ivy, and Cuthbert*, 1939, 128, 173
- Phosphatase(s):** Acid, blood serum, determination, *Gutman and Gutman*, 1940, 136, 201
- Shinowara, Jones, and Reinhart*, 1942, 142, 921
- Phosphatase(s)—continued:**
- Activity, oxidants and reductants, effect, *Sizer*, 1942, 145, 405
- Adenosinetri-, system, acetylcholine, activation, *DuBois and Potter*, 1943, 148, 451
- , tissue, determination, *DuBois and Potter*, 1943, 150, 185
- Alkaline, blood serum, determination, *Shinowara, Jones, and Reinhart*, 1942, 142, 921
- , —, hypophysectomy effect, *Jones and Shinowara*, 1942, 142, 935
- , zinc effect, *Hove, Elvehjem, and Hart*, 1940, 134, 425
- Blood, perosis, chick, *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 1939, 127, 411
- plasma, embryonic and tumor growth, effect, *Weil*, 1941, 138, 375
- , fat metabolism, relation, *Weil and Russell*, 1940, 136, 9
- , jaundice effect, *Weil and Russell*, 1942, 144, 307
- , magnesium-deficient diet, effect, *Snyder and Tweedy*, 1942, 146, 639
- , vitamin D effect, *Correll and Wise*, 1938, 126, 581
- Bone, perosis, chick, *Wiese, Johnson, Elvehjem, Hart, and Halpin*, 1939, 127, 411
- , sodium β -glycerophosphate hydrolysis, activation energy, *Bodansky*, 1939, 129, 197
- , sulphhydryl compounds, *in vitro*, influence, *Williams and Watson*, 1940, 135, 337
- Feces, aminoethyl phosphate and β -glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 1940, 132, 675
- , preparation and effect, *Chen, Freeman, and Ivy*, 1940, 132, 445
- α -Glycerophosphoric acids, synthetic, action, *Baer and Fischer*, 1940, 135, 321
- Hexosed-, *Gomori*, 1943, 148, 139
- Intestine, *Schmidt and Thannhauser*, 1943, 149, 369

Phosphatase(s)—*continued*:

Kidney, aminoethyl phosphate and β -glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes*,

1940, 132, 675

—, separation, *Perlmann and Ferry*,

1942, 142, 513

Nucleo-, intestine, tobacco mosaic virus, action, *Cohen and Stanley*,

1942, 142, 863

Tissues, normal and rachitic, action, *Truhlar, Dreker, McGuire, and Falk*,

1939, 127, 345

Yeast, determination, *Rae and Eastcott*,

1940, 136, 443

Phosphate(s): Acid-soluble, liver, carbohydrate metabolism and, radioactive phosphorus in study, *Kaplan and Greenberg*,

1943, 150, 479

Determination, manometric, micro-, *Hoagland*,

1940, 136, 543

Enamel, dentin, bone, and hydroxyapatite, adsorption, radioactive isotope in study, *Hodge, Van Huysen, Bonner, and Van Voorhis*,

1941, 138, 451

Inorganic, blood serum, determination, *Shinowara, Jones, and Reinhart*,

1942, 142, 921

—, —, hypophysectomy effect, *Jones and Shinowara*,

1942, 142, 935

—, muscle, radioactive phosphorus in study, *Bollman and Flock*,

1943, 147, 155

—, radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler*,

1940, 135, 165

Intestine mucosa, glucose absorption, effect, *Eiler, Stockholm, and Althausen*,

1940, 134, 238

Liver, glycogen relation, *Fenn*,

1939, 128, 297

Organic, determination, King method, urea and sodium chloride effect, *Rae and Eastcott*,

1939, 129, 255

—, intestine, glucose and phlorhizin, effect, *Beck*,

1942, 143, 403

Sodium determination, effect, *Sobel, Kraus, and Kramer*,

1941, 140, 501

Phosphate salt(s): Blood serum calcium-protein relationship, effect, ultracentrifuge studies, *Masket, Chanutrin, and Ludewig*,

1942, 143, 763

Phosphatide(s): Brain, inositol, *Folch and Woolley*,

1942, 142, 963

—, serine isolation, *Chargaff and Ziff*,

1941, 140, 927

Fatty acids, tubercle bacillus, *Peck and Anderson*,

1941, 138, 135

Formation, *Chargaff, Olson, and Partington*,

1940, 134, 505

Glycerophosphoric acid, nature, *Folch*,

1942, 146, 31

Inorganic salts and, *Christensen and Hastings*,

1940, 136, 387

Inositol, brain cephalin, separation, *Folch*,

1942, 146, 35

Lung protein, thromboplastic, blood coagulation, action, *Cohen and Chargaff*,

1941, 139, 741

Lyso-, *Chargaff and Cohen*,

1939, 129, 619

Phosphoric acid esters related to, synthesis, *Christensen*,

1940, 135, 399

Phytomonas tumefaciens, chemistry, *Geiger and Anderson*,

1939, 129, 519

Polysaccharide, tuberculin cell residues, *Anderson, Peck, and Creighton*,

1940, 136, 211

Proteins, basic, compounds between, *Chargaff and Ziff*,

1939, 131, 25

Reversal, wheat protein, crystalline, antimicrobial action, *Woolley and Krampitz*,

1942, 146, 273

Tissue, nitrogenous constituents, *Chargaff, Ziff, and Rittenberg*,

1942, 144, 343

Phosphatidyl ethanolamine: Brain cephalin, separation, *Folch*,

1942, 146, 35

Phosphatidyl serine: Brain cephalin, separation, *Folch*,

1942, 146, 35

—, serine component identification, *Folch*,

1941, 139, 973

Phosphocreatine: Muscle, radioactive phosphorus in study, *Bollman and Flock*,

1943, 147, 155

Phosphoglyceric acid: Preparation, *DuBois and Potter*,

1943, 147, 41

Phosphoglycerol: Acid-soluble, liver, determination, *Leva and Rapoport*, 1943, 149, 47

Phospholipid(s): Bases, determination, isotope method, *Chargaff, Ziff, and Rittenberg*, 1941, 138, 439

Bile, hepatic and gallbladder, *Johnston, Irvin, and Walton*, 1939, 131, 425

Blood, contaminants, *Christensen*, 1939, 129, 531

—, determination, *Marenzi and Cardini*, 1943, 147, 371

—, —, micro-, *Erickson, Avrin, Teagus, and Williams*, 1940, 135, 671

—, jaundice effect, *Weil and Russell*, 1942, 144, 307

— plasma, *Artom*, 1941, 139, 65

— —, dietary fat effect, *Artom and Freeman*, 1940, 135, 59

— —, diethylstilbestrol effect, *Flock and Bollman*, 1942, 144, 571

— —, formation site, radioactive phosphorus in study, *Fishler, Entenman, Montgomery, and Chaikoff*, 1943, 150, 47

Brain, formation *in vitro*, radioactive phosphorus as indicator, *Fries, Schachner, and Chaikoff*, 1942, 144, 59

—, — —, radioactive phosphorus in study, hexose and pentose effect, *Schachner, Fries, and Chaikoff*, 1942, 146, 95

—, — — —, metabolism, radioactive phosphorus as indicator, *Changus, Chaikoff, and Ruben*, 1938, 126, 493

Choline-containing, blood plasma, *Artom*, 1941, 139, 65

Ether-insoluble, blood and tissues, *Sinclair and Dolan*, 1942, 142, 659

Fate, intravenous injection, *Haven and Bale*, 1939, 129, 23

Fatty livers, *Flock, Hester, and Bollman*, 1939, 128, 153

Formation site, hepatectomy effect, radioactive phosphorus in study, *Fishler, Entenman, Montgomery, and Chaikoff*, 1943, 150, 47

Phospholipid(s)—continued:

Heart, serologically active, isolation and purification, *Pangborn*, 1942, 143, 247

Inositol-containing, soy bean, isolation and chemical constitution, *Woolley*, 1943, 147, 531

Kidney, formation *in vitro*, anaerobiosis and respiratory inhibitors, effect, radioactive phosphorus as indicator, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281

—, turnover, *Sinclair*, 1940, 134, 71

Liver, amino acid effect, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 135, 359

—, formation *in vitro*, anaerobiosis and respiratory inhibitors, effect, radioactive phosphorus as indicator, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281

—, fractionation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473

—, metabolism, *in vitro*, radioactive phosphorus as indicator, *Fishler, Taurog, Perlman, and Chaikoff*, 1941, 141, 809

—, turnover, *Sinclair*, 1940, 134, 71

—, —, methionine, cystine, and cysteine influence, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 1940, 133, 651

Metabolism, central nervous system, age influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*, 1940, 132, 23

—, kidney, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger*, 1940, 132, 219

—, liver, betaine influence, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 130, 593

—, —, cholesterol influence, radioactive phosphorus as indicator, *Perlman and Chaikoff*, 1939, 128, 735

—, muscle, denervated, *Artom*, 1941, 139, 953

Phospholipid(s)—continued:

Metabolism, neoplastic tissues, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631

—, radioactive phosphorus as indicator, *Changus, Chaikoff, and Ruben*, 1938, 126, 493

Perlman and Chaikoff, 1939, 127, 211

Jones, Chaikoff, and Lawrence, 1939, 128, 631

Perlman and Chaikoff, 1939, 128, 735

1939, 130, 593

Fries, Changus, and Chaikoff, 1940, 132, 23

Jones, Chaikoff, and Lawrence, 1940, 133, 319

Perlman, Stillman, and Chaikoff, 1940, 133, 651

1940, 135, 359

Muscle, inheritance and exercise effect, *Bloor*, 1940, 132, 77

Nerve, formation *in vitro*, radioactive phosphorus as indicator, *Fries, Schackner, and Chaikoff*, 1942, 144, 59

Oxidation, ascorbic acid and carcinogenic chemicals, effect, *Deutsch, Kline, and Rusch*, 1941, 141, 529

—, tissues, vanadium action, *Bernheim and Bernheim*, 1939, 127, 353

Testis, elaidic acid absence, *Sinclair*, 1940, 134, 89

Tissue, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671

—, diet relation, *Artom and Fishman*, 1943, 148, 405, 415, 423

Tumors, turnover, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1940, 133, 319

See also Lipid

Phosphopyruvate: Reactions, *Escherichia coli*, metal ions, effect, *Uiter and Werkman*, 1942, 146, 289

Phosphopyruvic acid: Dephosphorylation, carbohydrate breakdown, relation, *Meyerhof and Junowicz-Kocholaty*, 1942, 145, 443

Phosphoric acid: Aminoethyl-, metabolism, radioactive phosphorus isotope as indicator, *Chargaff and Keston*, 1940, 134, 515

Esters, phosphatide-related, synthesis, *Christensen*, 1940, 135, 399

See also Glycerophosphoric acid, Metaphosphoric acid

Phosphorus: Acid-soluble, blood cells, vertebrates, *Rapoport and Guest*, 1941, 138, 269

—, liver, distribution, fasting, diet effect, *Rapoport, Leva, and Guest*, 1943, 149, 65

—, —, —, — effect, *Rapoport, Leva, and Guest*, 1943, 149, 57

—, —, —, —, epinephrine, and insulin, effect, *Nelson, Rapoport, Guest, and Mirsky*, 1942, 144, 291

Blood, adrenalin injection effect, *MacVicar and Heller*, 1941, 137, 643

—, age effect, *Anderson and Elvehjem*, 1940, 134, 217

— cell, red, phytate, lipids, and nucleoproteins, exchange, *Rapoport, Leva, and Guest*, 1941, 139, 633

— lead, influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239

— serum, glucose, galactose, and xylose effect, *Free and Leonards*, 1943, 149, 203

— — sodium determination, effect, *Hald*, 1939, 130, 133

—, turnover, tissue, calcified, mineral metabolism relation, radioactive phosphorus as indicator, *Manly, Hodge, and Manly*, 1940, 134, 293

Bone lead, influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239

Brain, metabolism, radioactive phosphorus in study, *Fries and Chaikoff*, 1941, 141, 479

—Deficient diet, mineral metabolism, growth, and symptomatology, *Day and McCollum*, 1939, 130, 269

Glucose fermentation by *Streptococcus faecalis*, transformation, *O' Kane and Umbreit*, 1942, 142, 25

Heart, *Alburn and Myers*, 1939, 131, 713

Phosphorus—continued:

- Hypervitaminosis D₂ and D₃, ingestion effect, *Morgan, Shimotori, and Hendricks*, 1940, 134, 761
- Inorganic, blood cells, ricket., *Rapoport and Guest*, 1938, 126, 749
- , —, distribution, *Snyder and Katzenbogen*, 1942, 143, 223
- , bones and teeth, metabolism, radioactive phosphorus as indicator, *Manly and Bale*, 1939, 129, 125
- , excretion, glycine and histidine ingestion effect, *Hyde*, 1940, 134, 95
- Iron utilization, effect, *Fuhr and Steenbock*, 1943, 147, 59, 65, 71
- Labeled, organs, recovery, *Fries and Chaikoff*, 1941, 141, 469
- Low diet, vitamin D₂ effect, *Schneider and Steenbock*, 1939, 128, 159
- Metabolism, oil and glucose absorption, effect, *Reiser*, 1940, 135, 303
- , phlorhizin diabetes, radioactive phosphorus as indicator, *Weissberger*, 1941, 139, 543
- , rickets, vitamin D effect, radioactive isotopes as indicator, *Cohn and Greenberg*, 1939, 130, 625
- Muscle, *Myers and Mangun*, 1940, 132, 701
- , *Mangun and Myers*, 1940, 135, 411
- , heart, *Mangun and Myers*, 1940, 135, 411
- , muscle dystrophy, nutritional, *Goettsch, Lonstein, and Hutchinson*, 1939, 128, 9
- Organic acid-soluble, blood cells, rickets, *Rapoport and Guest*, 1938, 126, 749
- , determination, micro-, *Horecker, Ma, and Haas*, 1940, 136, 775
- Radioactive, aminoethylphosphoric acid metabolism, indicator, *Chargaff and Keston*, 1940, 134, 515
- , brain phospholipid formation *in vitro*, indicator, *Fries, Schachner, and Chaikoff*, 1942, 144, 59
- , — — — *in vitro*, study with, hexose and pentose effect, *Schachner, Fries, and Chaikoff*, 1942, 145, 95

Phosphorus—continued:

- Radioactive, brain phospholipid metabolism, indicator, *Changus, Chaikoff, and Ruben*, 1938, 126, 493
- , central nervous system phospholipid metabolism indicator, age influence, *Fries, Changus, and Chaikoff*, 1940, 132, 23
- , choline action on liver, indicator, *Perlman and Chaikoff*, 1939, 127, 211
- , kidney phospholipid and total phosphorus metabolism, ammonium chloride effect, indicator, *Weissberger*, 1940, 132, 219
- , — — formation *in vitro*, anaerobiosis and respiratory inhibitors, study with, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281
- , liver phosphates, acid-soluble, carbohydrate metabolism and, use in study, *Kaplan and Greenberg*, 1943, 150, 479
- , — phospholipid formation *in vitro*, anaerobiosis and respiratory inhibitors, study with, *Taurog, Chaikoff, and Perlman*, 1942, 145, 281
- , — — metabolism *in vitro*, study with, *Fishler, Taurog, Perlman, and Chaikoff*, 1941, 141, 809
- , — — —, indicator, betaine influence, *Perlman and Chaikoff*, 1939, 130, 593
- , — — turnover, indicator, cholesterol effect, *Perlman and Chaikoff*, 1939, 128, 735
- , — — —, indicator, methionine, cystine, and cysteine influence, *Perlman, Stillman, and Chaikoff*, 1940, 133, 651
- , muscle phosphocreatine and inorganic phosphate, study with, *Bollman and Flock*, 1943, 147, 155
- , nerve phospholipid formation *in vitro*, indicator, *Fries, Schachner, and Chaikoff*, 1942, 144, 59
- , phospholipid formation, site, study with, *Fishler, Entenman, Montgomery, and Chaikoff*, 1943, 150, 47

Phosphorus—continued:

- Radioactive, phospholipid metabolism indicator, *Changus, Chaikoff, and Ruben*, 1938, 126, 493
Perlman and Chaikoff, 1939, 127, 211
Jones, Chaikoff, and Lawrence, 1939, 128, 631
Perlman and Chaikoff, 1939, 128, 735
 1939, 130, 593
Fries, Changus, and Chaikoff, 1940, 132, 23
Jones, Chaikoff, and Lawrence, 1940, 133, 319
Perlman, Stillman, and Chaikoff, 1940, 133, 651
 1940, 135, 359
 —, —, neoplastic tissues, indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
 —, prothrombin conversion to thrombin, indicator, *Chargaff, Ziff, and Cohen*, 1940, 135, 351
 —, tumor phospholipid turnover, indicator, *Jones, Chaikoff, and Lawrence*, 1940, 133, 319
 —, vitamin D action, study with, *Shimotori and Morgan*, 1943, 147, 201
 Skeleton, turnover, pregnancy, diet effect, *Manly and Levy*, 1941, 139, 35
 Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
 Utilization, intestine hydrogen ion concentration relation, *Jones*, 1942, 142, 557
 See also Phytate phosphorus
Phosphorus compound(s): Acid-soluble, brain, *Stone*, 1940, 135, 43
 —, cerebrum, *Stone*, 1943, 149, 29
 Brain, *Kerr*, 1941, 140, 77
 1942, 145, 647
 Egg yolk, formation, *Chargaff*, 1942, 142, 505
Phosphorylase: Crystalline, muscle, *Green, Cori, and Cori*, 1942, 142, 447

Phosphorylase—continued:

- Crystalline, muscle, polysaccharide synthesis relation, *Hassid, Cori, and McCready*, 1943, 148, 89
 Starch, potato, *Green and Stumpf*, 1942, 142, 355
Phosphorylation: Brain extracts, *Ochoa*, 1941, 141, 245
 Muscle, potassium rôle, *Boyer, Lardy, and Phillips*, 1942, 146, 673
Phospho-12-tungstate(s): Diamino acids, proline, glycine, and tryptophane, solubility and composition, *Van Slyke, Hiller, and Dillon*, 1942, 146, 137
Photometer: Photoelectric, *Rosenfeld*, 1939, 129, 179
Photosynthesis: *Chlorella pyrenoidosa*, inhibition, *Green, McCarthy, and King*, 1939, 128, 447
Phthiocerol: Hydrocarbon, x-ray study, *Stenhagen*, 1943, 148, 695
 Monolayers, *Stållberg and Stenhagen*, 1942, 143, 171
Phthiocol: Synthesis, *Anderson and Creighton*, 1939, 130, 429
Phthioic acid: Monolayers, *Stenhagen and Stållberg*, 1941, 139, 345
Phyllochromogen: Protoporphyrin and pyridine, *Ross*, 1939, 127, 163
Physostigmine: Cholinesterase, effect, *Eadie*, 1942, 146, 85
Phytase: Blood plasma and blood cell, red, vertebrates, *Rapoport, Leva, and Guest*, 1941, 139, 621
Phytate: Blood cell, red, phosphorus exchange, *Rapoport, Leva, and Guest*, 1941, 139, 633
Phytate phosphorus: Blood, determination, *Leva and Rapoport*, 1941, 141, 343
Phytic acid: Blood cell, red, avian, *Rapoport*, 1940, 135, 403
 Iron availability, effect, *Fuhr and Steenbock*, 1943, 147, 59
Phytomonas tumefaciens: Glutamic and aspartic acid configuration, *Chargaff*, 1939, 130, 29
 Lipids and phosphatide, *Geiger and Anderson*, 1939, 129, 519

- Picric acid:** Pituitary hormone, anterior, follicle-stimulating, effect, *Jensen and Tolksdorf*, 1940, 132, 519
- Picrolonic acid:** Calcium determination, use in, *Cohn and Kolthoff*, 1943, 147, 705
1943, 148, 711
- Titration, amperometric, *Cohn and Kolthoff*, 1943, 148, 711
- Pigment(s):** Carotenoid, sea mussel, metabolism, *Scheer*, 1940, 136, 275
- Chloroplast, determination, spectrophotometric, *Haskin*, 1942, 144, 149
- Green, diatoms and algae, *Strain and Manning*, 1942, 144, 625
- Heme, feces, urine, and blood plasma, determination, *Flink and Watson*, 1942, 146, 171
- Nitzschia closterium*, *Pace*, 1941, 140, 483
- Producing compound, green, urine, pyridoxine relation, *Lepkovsky and Nielsen*, 1942, 144, 135
- Pyrrole-containing, hemoglobin synthesis, relation, *Kohler, Elvehjem, and Hart*, 1939, 128, 501
- Respiratory, *Urechis* eggs, *Horowitz and Baumberger*, 1941, 141, 407
- Pigmentation:** Feather, nutritional factor, *McGinnis, Norris, and Heuser*, 1942, 145, 341
- Pine:** White, hemicelluloses, polyuronide, *Anderson, Kesselman, and Bennett*, 1941, 140, 563
- Pineapple:** Hexosamine, uncombined, ammonium sulfate or calcium nitrate effect, *Sideris, Young, and Krauss*, 1938, 126, 233
- Pituitary:** Adrenocorticotrophic hormone, insulin hypoglycemia and liver glycogen, effect, *Grattan and Jensen*, 1940, 135, 511
- Adrenotropic hormone, preparation and properties, *Sayers, White, and Long*, 1943, 149, 425
- Antagonist, chemistry, *Bischoff*, 1940, 133, 621
- Pituitary—continued:**
- Anterior, follicle-stimulating hormone, picric and flavianic acids, effect, *Jensen and Tolksdorf*, 1940, 132, 519
- , growth hormone, purification, *Marz, Simpson, and Evans*, 1943, 147, 77
- , thyrotropic hormone, purification, *Fraenkel-Conrat, Fraenkel-Conrat, Simpson, and Evans*, 1940, 135, 199
- , See also Prolactin
- Extracts, gonadotropic activity, trypsin and ptyalin effect, *McShan and Meyer*, 1938, 126, 361
- Follicle-stimulating activity, enzyme relation, *McShan and Meyer*, 1940, 132, 783
- fractions, preparation and properties, trypsin digestion, *McShan and Meyer*, 1940, 135, 473
- hormone, chemistry, *Fevold*, 1939, 128, 83
- , purification, *Jensen, Tolksdorf, and Bamman*, 1940, 135, 791
- , separation, *Greep, van Dyke, and Chow*, 1940, 133, 289
- Interstitial cell-stimulating hormone, purification, *Jensen, Tolksdorf, and Bamman*, 1940, 135, 791
- Iodine, *Baumann and Metzger*, 1939, 127, 111
- Lactogenic hormone, *Li, Lyons, and Evans*, 1940, 136, 709
1941, 139, 43
1941, 140, 43
- Li, Simpson, and Evans*, 1942, 146, 627
- Li*, 1942, 146, 633
1943, 148, 289
- , diffusion and viscosity measurements, *Li*, 1942, 146, 633
- , isolation, *Li, Simpson, and Evans*, 1942, 146, 627
- , molecular weight, *Li, Lyons, and Evans*, 1941, 140, 43
- , reactions with iodine, *Li, Lyons, and Evans*, 1941, 139, 43
- , sulfur amino acid, *Li*, 1943, 148, 289

Pituitary—continued:

Lactogenic hormone, tyrosine and tryptophane, *Li, Lyons, and Evans*, 1940, 136, 709

Luteinizing hormone, chemistry, *Fevold*, 1939, 128, 83

—, separation, *Greep, van Dyke, and Chow*, 1940, 133, 289

Oxytocic hormones, cystine, tyrosine, and arginine, *Potts and Gallagher*, 1942, 143, 561

Posterior, pressor principle, nature, amphoteric, *Cohn, Irving, and du Vigneaud*, 1941, 137, 635

Pressor hormones, cystine, tyrosine, and arginine, *Potts and Gallagher*, 1942, 143, 561

See also Hypophysectomy

Pituitary extract(s): Anterior, fractions, ketogenic and respiratory quotient-reducing substances, preparation and assay, *Greaves, Freiberg, and Johns*, 1940, 133, 243

—, nitrogen excretion, creatinuria, and basal metabolism, effect, *Gaebler and Bartlett*, 1939, 129, 559

Placenta: α -Dihydrotheelin isolation, *Huffman, Thayer, and Doisy*, 1940, 133, 567

Sodium, radioactive, transfer, *Pohl and Flezner*, 1941, 139, 163

Theelin isolation, *Westerfeld, MacCorquodale, Thayer, and Doisy*, 1938, 126, 195

Plant(s): Forage, hemicelluloses, *Ben-nett*, 1942, 146, 407

Green, amide synthesis, mechanism, *Vickery and Pucher*, 1939, 128, 703

Growth substance, tryptophane conversion, alkalinity effect, *Gordon and Wildman*, 1943, 147, 389

Nicotinic acid determination, chemical, *Hale, Davis, and Baldwin*, 1942, 146, 553

Nutrients, inorganic, malt diastase, effect, *Braun*, 1942, 145, 197

Protease, *Hura crepitans*, *Jaffé*, 1943, 149, 1

Proteases, *Greenberg and Winnick*, 1940, 135, 761, 775, 781

Plant(s)—continued:

Proteases, activation-inhibition reaction, *Greenberg and Winnick*, 1940, 135, 761

—, hydrogen ion concentration-activity curves, *Greenberg and Winnick*, 1940, 135, 775

—, kinetics, *Greenberg and Winnick*, 1940, 135, 781

Viruses, isolation and crystallization, hydrophilic colloids, use in, *Cohen*, 1942, 144, 353

Plantago fastigiata: See Wheat

Plasma: Blood. See Blood plasma

Semen, proteins, *Ross, Moore, and Miller*, 1942, 144, 667

Plasmodium knowlesi: Blood lactic and pyruvic acids, effect, *Wendel and Kimball*, 1942, 145, 343

Respiratory and carbohydrate metabolism, *Wendel*, 1943, 148, 21

Plastein(s): Synthesis, insulin digests, trypsin and papain effect, *Haddock and Thomas*, 1942, 144, 691

Pleural fluid: Hyaluronic acid, tumor relation, *Meyer and Chaffee*, 1940, 133, 83

Pneumococcus: Antigen, heterophile, *Goebel, Shedlovsky, Lavin, and Adams*, 1943, 148, 1

Growth, choline, pantothenic acid, and nicotinic acid, effect, *Rane and Subbarow*, 1940, 134, 455

Polysaccharide, Type III, chemical constitution, *Reeves and Goebel*, 1941, 139, 511

Polysaccharides, specific, antibody combination velocity, *Mayer and Heidelberger*, 1942, 143, 567

Soluble specific substance, chem-immunology, *Goebel, Beeson, and Hoagland*, 1939, 129, 455

Reeves and Goebel, 1941, 139, 511

Type XIV polysaccharide, capsular, blood Group A specific substance, relation, *Goebel, Beeson, and Hoagland*, 1939, 129, 455

Pneumonia: Blood, oxygen and carbon dioxide effect, *Cohn, Tannenbaum, Thalheimer, and Hastings*, 1939, 128, 109

- Pollen: Ragweed, extract, electrophoretic patterns, *Abramson and Moore*, 1942, 144, 579
- Polyhydroxyanthraquinone(s): Blood coagulation, vitamin K deficiency, effect, *Martin and Lischer*, 1941, 137, 169
- Polymerase: Ribonucleode-, *Schmidt and Levene*, 1938, 126, 423
- Polypeptidase: Yeast, isolation and properties, *Johnson*, 1941, 137, 575
- Polyphenoloxidase: Kidney extracts, cell-free, properties, *Cadden and Dill*, 1942, 143, 105
- Polysaccharide(s): Blood serum proteins, electrophoretically separated, *Bliz, Tiselius, and Svensson*, 1941, 137, 485
- Coccidioides immitis*, immunologically active, *Hassid, Baker, and McCready*, 1943, 149, 303
- Crown-gall, *McIntire, Peterson, and Riker*, 1942, 143, 491
- Hemolytic streptococcus, Lancefield Group A-specific, purification and properties, *Zittle and Harris*, 1942, 142, 823
- Hexoses, identification and determination, carbazole method, *Gurin and Hood*, 1939, 131, 211
- Leprosy bacillus, lipids, *Anderson and Creighton*, 1939, 131, 549
- Muco-, skin, *Meyer and Chaffee*, 1941, 138, 491
- , synovial fluid, isolation, *Meyer, Smyth, and Dawson*, 1939, 128, 319
- Phosphatide, tuberculin cell residues, *Anderson, Peck and Creighton*, 1940, 136, 211
- Pneumococcus Type III, chemical constitution, *Reeves and Goebel*, 1941, 139, 511
- — XIV, blood Group A specific substance, relation, *Goebel, Beeson, and Hoagland*, 1939, 129, 455
- Specific, pneumococcus, antibody combination velocity, *Mayer and Heidelberg*, 1942, 143, 567
- Synthesis, enzymatic, from glucose, *Colowick and Sutherland*, 1942, 144, 423
- Polysaccharide(s)—continued:
- Synthesis, muscle phosphorylase, *Hassid, Cori, and McCready*, 1943, 148, 89
- , streptococcus, *Niven, Smiley, and Sherman*, 1941, 140, 105
- Synthetic, Roentgen ray diffraction, *Bear and Cori*, 1941, 140, 111
- Tubercle bacillus, avian, *Karjala and Heidelberg*, 1941, 137, 189
- —, bovine, *Menzel and Heidelberg*, 1939, 127, 221
- Tuberculin, isolation, electrophoretic, *Seibert and Watson*, 1941, 140, 55
- protein, removal, *Seibert*, 1940, 133, 593
- Tumors, *Kabat*, 1939, 130, 143
- Polysulfide: Sulfur-, colloidal, mixture, absorption and oxidation, *Green-gard and Woolley*, 1940, 132, 83
- Populus macdougalii*: See Cottonwood
- Porphyrin(s): Copro-, I, pyridine, spectrophotometry, *Clark and Perkins*, 1940, 135, 643
- , iron, nitrogenous bases, coordination, *Vesiling*, 1940, 135, 623
- , protoporphyrin conversion, liver, *Watson, Pass, and Schwartz*, 1941, 139, 583
- Salzburg and Watson*, 1941, 139, 593
- Etio-, iron, nitrogenous bases, coordination, *Vesiling*, 1940, 135, 623
- Ferriproto-, nitrogenous derivatives, cyanide reaction with, *Drabkin*, 1942, 142, 855
- Hemato-, iron, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- Iron-, compounds, marine organisms, *Ball and Meyerhof*, 1940, 134, 483
- Liver, metabolism, *Salzburg and Watson*, 1941, 139, 593
- Meso-, cobalt and manganese, nitrogenous bases, coordination, *Taylor*, 1940, 135, 569
- , iron, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- , protoporphyrin conversion, micro, *Grinstein and Watson*, 1943, 147, 671

Porphyrin(s)—continued:

- Metallo-, *Clark, Taylor, Davies, and Vestling*, 1940, 135, 543
Taylor, 1940, 135, 569
Davies, 1940, 135, 597
Vestling, 1940, 135, 623
Clark and Perkins, 1940, 135, 643
 —, nitrogenous bases, coordination, *Clark, Taylor, Davies, and Vestling*, 1940, 135, 543

Proto-. See Protoporphyrin

- Porphyrindin:** Myosin, sulfhydryl groups, determination, use, *Greenstein and Edsall*, 1940, 133, 397
 Reactivity, proteins, denatured, presence, *Greenstein and Jenrette*, 1942, 142, 175

Reducing groups, determination, use, *Brand and Kassell*, 1940, 133, 437

- Potassium:** Adenylic system, phosphorylation, rôle, *Boyer, Lardy, and Phillips*, 1943, 149, 529

Biological materials, determination, colorimetric, micro-, *Salit*, 1940, 136, 191

- — —, spectrochemical, micro-, *Duffendack, Thomson, Lee, and Koppius*, 1938, 126, 1

Blood cell membrane, transfer, *Danowski*, 1941, 139, 693

- —, red, metabolism effect, *Harris*, 1941, 141, 579

— — —, permeability, *Kurnick*, 1941, 140, 581

- , determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*, 1942, 145, 85

—, distribution, *Snyder and Katzenbogen*, 1942, 143, 223

- plasma, determination, micro-, chloroplatinate precipitation, *Tenery and Anderson*, 1940, 135, 659

— serum, asphyxia effect, *Cattell and Civin*, 1938, 126, 633

- —, determination, *Consolazio and Talbott*, 1938, 126, 55

— — —, micro-, electro dialysis, *Sobel, Hanok, and Kramer*, 1942, 144, 363

- — —, extracellular fluid and sodium depletion, effect, *Miller*, 1943, 147, 121

Potassium—continued:

Bone, spectrochemistry, *Steadman, Hodge, and Horn*, 1941, 140, 71

Determination, *Cunningham, Kirk, and Brooks*, 1941, 139, 21

—, micro-, *Weichselbaum, Somogyi, and Rusk*, 1940, 132, 343

—, silver cobaltinitrite method, *Harris*, 1940, 136, 619

Distribution, intravascular injection, effect, *Wilde*, 1939, 128, 309

Liver, glycogen relation, *Fenn*, 1939, 128, 297

— Low diet, blood cells, red, and muscle cations, effect, *Hegnauer*, 1943, 150, 353

Metabolism, radioactive isotopes as indicator, *Joseph, Cohn, and Greenberg*, 1939, 128, 673

Muscle, *Myers and Mangun*, 1940, 132, 701

—, extracellular fluid and sodium depletion, effect, *Miller*, 1943, 147, 121

—, frog, *Steinbach*, 1940, 133, 695

—, heart, *Mangun and Myers*, 1940, 135, 411

— phosphorylations, rôle, *Boyer, Lardy, and Phillips*, 1942, 146, 673

Nutrition effect, *Orent-Keiles and McCollum*, 1941, 140, 337

Radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler*, 1940, 135, 165

Tissue, determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*, 1942, 145, 85

Tooth, spectrochemistry, *Steadman, Hodge, and Horn*, 1941, 140, 71

Urine, determination, *Consolazio and Talbott*, 1938, 126, 55

Potassium salt(s): Muscle and liver water, effect, *Eichelberger*, 1941, 138, 583

— water and electrolytes, hydro-nephrosis, effect, *Eichelberger*, 1941, 140, 467

Potato: Starch phosphorylase, *Green and Stumpf*, 1942, 142, 355

Pregnancy: Blood serum, blood and liver lipids, fowl, effect, *Entenman, Lorenz, and Chaikoff*,

1938, 126, 133

— gonadotropin, enzymes, effect, *Evans and Hauschildt*,

1942, 145, 335

— 7(β)-hydroxycholesterol isolation, *Wintersteiner and Ritzmann*,

1940, 136, 697

Organ and tissue protein, metabolism, *Poo, Lew, and Addis*,

1939, 128, 69

Skeleton phosphorus turnover, diet effect, *Manly and Levy*,

1941, 139, 35

Urine allopregnanol-3(β)-one-20, isolation, *Pearlman, Pincus, and Werthessen*,

1942, 142, 649

— androstanol-3(β)-one and allopregnanol-3(β)-one-20, isolation, *Heard and McKay*,

1939, 131, 371

—, *n*-butanol and, sodium pregnanediol glucuronide distribution, *Woolf, Viergiver, and Allen*,

1942, 146, 323

— dihydrotheelin, isolation, *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*,

1939, 130, 431

— α -dihydrotheelin, isolation, *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*,

1940, 134, 591

— Δ -5,7,9-estratrienol-3-one-17, isolation, *Heard and Hoffman*,

1940, 135, 801

1941, 138, 651

— estrogenic substances, conjugated, hydrolysis, *Edson and Heard*,

1939, 130, 579

— estrogens, determination, photometric, *Bachman and Pettit*,

1941, 138, 689

— estrone sulfate, isolation, *Schachter and Marrian*,

1938, 126, 663

— gonadotropic hormone, *Gurin, Bachman, and Wilson*,

1929, 128, 525

1940, 133, 467, 477

Pregnancy—continued:

Urine gonadotropic hormone, *Lundgren, Gurin, Bachman, and Wilson*,

1942, 142, 367

— —, chemistry, *Gurin, Bachman, and Wilson*,

1940, 133, 467

— —, preparation, *Gurin, Bachman, and Wilson*,

1929, 128, 525

— —, purity, *Gurin, Bachman, and Wilson*,

1940, 133, 477

— histidine, *Langley*,

1941, 137, 255

— pregnandiol-3(α),20(α), isolation, *Fish, Dorfman, and Young*,

1942, 143, 715

— sodium pregnanediol glucuronide, determination, titrimetric, *Allen and Viergiver*,

1941, 141, 837

Pregnandiol-3(α),20(α): Urine, pregnancy, isolation, *Fish, Dorfman, and Young*,

1942, 143, 715

Pregnanediol: Excretion, desoxycorticosterone acetate effect, *Hoffman, Kazmin, and Browne*,

1943, 147, 259

Urine, determination, *Marker and Hartman*,

1940, 133, 529

Astwood and Jones,

1941, 137, 397

Pregnanediol glucuronide: Sodium, *n*-butanol and pregnancy urine, distribution, *Woolf, Viergiver, and Allen*,

1942, 146, 323

—, urine, determination, micro-, *Venning*,

1938, 126, 595

— —, pregnancy, determination, titrimetric, *Allen and Viergiver*,

1941, 141, 837

Pregnanetriol-3(α),17,20: Preparation, *Hirschmann*,

1941, 140, 797

Pregnanol-3(β)-one-20: Allo-, urine, pregnancy, isolation, *Pearlman, Pincus, and Werthessen*,

1942, 142, 649

Pressor amine(s): Phenolic, tyrosinase relation, *Alles, Blohm, and Saunders*,

1942, 144, 757

Pressor principle: Pituitary, posterior, nature, amphoteric, *Cohn, Irving, and du Vigneaud*,

1941, 137, 635

Pressure: Pepsin and renin activity, effect, *Matthews, Dow, and Anderson*,

1940, 135, 697

- Primate(s):** Blood and urine β -hydroxybutyric to acetoacetic acid ratio, *Friedemann*, 1942, 142, 635
 Ketosis, *Friedemann*, 1942, 142, 635
Progesterone: 17-Hydroxy-, adrenals, isolation, *Pfiffner and North*, 1941, 139, 855
 17- β -Hydroxy-, *Pfiffner and North*, 1940, 132, 459
 Metabolism, *Heard, Bauld, and Hoffman*, 1941, 141, 709
Prolactin: *White, Bonsnes, and Long*, 1942, 143, 447
 Absorption spectrum, *White and Lavin*, 1940, 132, 717
 Preparation, *Schwenk, Fleischer, and Tolksdorf*, 1943, 147, 535
 Solubility, alcohol, *Fleischer*, 1943, 147, 525
Prolan: Inactivation, reversible, *Bischoff*, 1942, 145, 545
Proline: Activity, aqueous solution, *Smith and Smith*, 1940, 132, 57
 Gelatin, *Stein and Bergmann*, 1940, 134, 627
 Ionization, aqueous solution, *Smith, Gorham, and Smith*, 1942, 144, 737
l- and *dl*-proline-containing mixtures, determination, *Stein and Bergmann*, 1940, 134, 627
 —, oxidation, sodium selenite effect, *Bernheim and Klein*, 1941, 139, 827
Ornithine conversion, biological, *Roloff, Ratner, and Schoenheimer*, 1940, 136, 561
 Phospho-12-tungstates, solubility and composition, *Van Slyke, Hiller, and Dillon*, 1942, 146, 137
Prolycopene: *Evonymus fortunei*, isolation, *Zechmeister and Escue*, 1942, 144, 321
Pyracantha angustifolia fruit, *Zechmeister and Schroeder*, 1942, 144, 315
Propionic acid: *l*- and *dl*- α -hydroxy- β -benzylthio-, metabolism, *Stekol*, 1941, 140, 827
 Liver glycogen, radioactive isotope in study, *Buchanan, Hastings, and Nesbett*, 1943, 150, 413
Propionylglycine: Hippuric acid synthesis, effect, *Abbott*, 1942, 145, 241
Prostigmine: Cholinesterase, effect, *Eadie*, 1942, 146, 85
Protamine: Fibrinogen determination, use, *Mylon, Winternitz, and de Sütö-Nagy*, 1942, 143, 21
Protease(s): *Hura crepitans*, *Jaffé*, 1943, 149, 1
 Plant, *Greenberg and Winnick*, 1940, 135, 761, 775, 781
 —, activation-inhibition reaction, *Greenberg and Winnick*, 1940, 135, 761
 —, hydrogen ion concentration-activity curves, *Greenberg and Winnick*, 1940, 135, 775
 —, kinetics, *Greenberg and Winnick*, 1940, 135, 781
Protein(s): Amide bonds, hydrolysis, catalysis, *Steinhardt*, 1941, 141, 995
 Amino acids, basic, determination, electrolytic, *Albanese*, 1940, 134, 467
 Ammonia formation, alkaline solution, *Warner and Cannan*, 1942, 142, 725
 Animal, purified, alcohol effect, *Harris and Mattill*, 1940, 132, 477
 Antibody, nitrogen, dietary, immunity, effect, *Heidelberger, Treffers, Schoenheimer, Ratner, and Rittenberg*, 1942, 144, 555
 —, —, —, immunized animals, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 1942, 144, 545
 Aucuba mosaic virus, tomato roots, isolation, *Stanley*, 1938, 126, 125
 Basic, phosphatides, compounds between, *Chargaff and Ziff*, 1939, 131, 25
 Blood, nitrogen, dietary, interaction, *Schoenheimer, Ratner, Rittenberg, and Heidelberger*, 1942, 144, 541
 — plasma, anticoagulants, electrophoresis study, *Chargaff, Ziff, and Moore*, 1941, 139, 383
 — serum, *Kendall*, 1941, 138, 97
 — —, amino acids, basic, *Block*, 1940, 133, 71

Protein(s)—continued:

- Blood serum, analysis, *Murrill, Block, and Neuburgh*, 1940, 133, 521
- —, arginine ingestion effect, *Block*, 1940, 133, 71
- —, azolesterase activity, *Glick, Glaubach, and Moore*, 1942, 144, 525
- —, calcium and, relationship, alkalosis effect, *Yannet*, 1941, 137, 409
- —, casein and casein digest effect, *Mueller, Kemmerer, Cox, and Barnes*, 1940, 134, 573
- —, determination, biuret reaction use, *Robinson and Hogden*, 1940, 135, 707, 727
- —, —, gravimetric, *Robinson and Hogden*, 1941, 140, 853
- —, electrophoresis, *Sharp, Cooper, and Neurath*, 1942, 142, 203
- Sharp, Cooper, Erickson, and Neurath*, 1942, 144, 139
- —, electrophoretically separated, lipids and polysaccharides, *Bliz, Tiselius, and Svensson*, 1941, 137, 485
- —, fractionation, electrophoretic and sodium sulfate methods, *Taylor and Keys*, 1943, 148, 379
- —, phenol red absorption curve, effect, *Robinson and Hogden*, 1941, 137, 239
- —, quartz and colloid particles, electric mobilities, film formation, relation, *Moyer and Gorin*, 1940, 133, 605
- —, specific gravity relation, *Schousboe*, 1939, 129, 371
- , tuberculosis, electrophoresis study, *Seibert and Nelson*, 1942, 143, 29
- , *See also Hypoproteinemia*
- Body, dietary glycine and, interaction, *Ratner, Rittenberg, Keston, and Schoenheimer*, 1940, 134, 665
- , metabolism, *l*(-)-leucine, isotope-containing as indicator, *Schoenheimer, Ratner, and Rittenberg*, 1939, 130, 703
- Bushy stunt virus, homogeneity, *Lauffer*, 1942, 143, 99

Protein(s)—continued:

- Calcium chloride and, interaction determination, amalgam electrode, *Joseph*, 1938, 126, 389
- Calcium-, relationship, blood serum, calcium and phosphate salts, effect, ultracentrifuge studies, *Masket, Chanutin, and Ludewig*, 1942, 143, 763
- , —, —, ultracentrifuge studies, *Ludewig, Chanutin, and Masket*, 1942, 143, 753
- , —, calcium caseinate solutions, ultracentrifuge studies, *Chanutin, Ludewig, and Masket*, 1942, 143, 737
- , —, ultracentrifuge studies, *Chanutin, Ludewig, and Masket*, 1942, 143, 737
- Ludewig, Chanutin, and Masket*, 1942, 143, 753
- Masket, Chanutin, and Ludewig*, 1942, 143, 763
- Carbon suboxide and, *Ross and Christensen*, 1941, 137, 89
- Christensen and Ross*, 1941, 137, 101
- Ross and Green*, 1941, 137, 105
- Oncley, Ross, and Tracy*, 1941, 141, 797
- Tracy and Ross*, 1942, 142, 871
- Ross and Tracy*, 1942, 145, 19
- Tracy and Ross*, 1942, 146, 63
- —, reaction, nature, *Ross and Christensen*, 1941, 137, 89
- Tracy and Ross*, 1942, 142, 871
- Cellular nuclei, *Mayer and Gulick*, 1942, 146, 433
- Cerebrospinal fluid, determination, colorimetric, *Looney and Walsh*, 1939, 127, 117
- Copper-, oxidases, properties, *McCarthy, Green, and King*, 1939, 128, 455
- Cupric chloride crystallization, effect, *Morris and Morris*, 1941, 141, 515
- Deaminized, cystine, *Hess and Sullivan*, 1939, 128, 93
- Denaturation and reversal, *Neurath, Cooper, and Erickson*, 1942, 142, 249, 265

Protein(s)—continued:

- Denaturation and reversal, *Bernheim, Neurath, and Erickson*, 1942, 144, 259
- Denatured, porphyrindin reactivity in presence, *Greenstein and Jenrette*, 1942, 142, 175
- Derivatives, purified, tuberculins, properties, *Steenken*, 1941, 141, 91
- Detergents, synthetic, and, complex formation, *Putnam and Neurath*, 1943, 150, 263
- Digestibility *in vitro*, *Jones and Gersdorff*, 1939, 129, 207
- Egg, carbohydrate group, *Levene*, 1941, 140, 279
- white, injury-producing, concentration and assay, *Eakin, Snell, and Williams*, 1941, 140, 535
- Electrophoresis, boundary spread, *Sharp, Hebb, Taylor, and Beard*, 1942, 142, 217
- Fat synthesis from, vitamin B effect, *McHenry and Gavin*, 1941, 138, 471
- Fibrous, hagfish slime, *Ferry*, 1941, 138, 263
- Flavo-, catalysis, substituted phenols, effect, *Krahl, Keltch, and Clowes*, 1940, 136, 563
- , milk, diphosphopyridine nucleotide, reduced, oxidation, effect, *Ball and Ramsdell*, 1939, 131, 767
- , yeast, *Green, Knox, and Stumpf*, 1941, 138, 775
- Glucose, conversion, pancreatotomy and phlorhizin effect, *Gray, Ivy, and Cuthbert*, 1939, 128, 173
- Glyco-, blood plasma, mammary gland, lactating, utilization, *Reineke, Williamson, and Turner*, 1941, 138, 83
- Growth, calcification, intake relation, *Conner, Kao, and Sherman*, 1941, 139, 835
- High diets, fat synthesis, fasting, *Longenecker*, 1939, 128, 645
- Hydrolysates, cystine determination, micro-, polarographic, *Stern, Beach, and Macy*, 1939, 130, 733
- , lysine isolation, *Rice*, 1939, 131, 1

Protein(s)—continued:

- Hydrolysates, *L*-serine, *L*-alanine, *L*-phenylalanine, *L*-leucine, preparation, *Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- , tryptophane, color test, *Albanese and Frankston*, 1942, 144, 563
- , tryptophane-containing, preparation, intravenous injection effect, *White and Elman*, 1942, 143, 797
- Hydrolysis, enzymatic, *Bernheim, Neurath, and Erickson*, 1942, 144, 259
- , optical rotation in study, *Winnick and Greenberg*, 1941, 137, 429
- Hydroxylysine determination, *Van Slyke, Hiller, and MacFadyen*, 1941, 141, 681
- Iodinated, thyroid activity, effect, *Reineke, Williamson, and Turner*, 1943, 147, 115
- dl*-Lanthionine isolation, *Horn, Jones, and Ringel*, 1942, 144, 93
- Lipo-, *Chargaff*, 1942, 142, 491
- Liver, autolysis, *Luck, Eudin, and Nimmo*, 1939, 131, 201
- Lung, thromboplastic, blood coagulation, action, *Cohen and Chargaff*, 1940, 136, 243
- , —, electrophoresis, *Cohen and Chargaff*, 1941, 139, 741
- Macro molecules, isolation and crystallization, hydrophilic colloids, use in, *Cohen*, 1942, 144, 353
- Malignant tissue, glutamic acid, *Woodward, Reinhart, and Dohan*, 1941, 138, 677
- Mesolanthionine isolation, *Horn, Jones, and Ringel*, 1942, 144, 87
- Metabolism, *Schoenheimer and Rittenberg*, 1939, 127, 285
- , *Rittenberg, Keston, Rosebury, and Schoenheimer*, 1939, 127, 291
- , *Schoenheimer and Ratner*, 1939, 127, 301
- , *Keston, Rittenberg, and Schoenheimer*, 1939, 127, 315
- , *Foster, Schoenheimer, and Rittenberg*, 1939, 127, 319

Protein(s)—continued:

- Metabolism, *Rittenberg and Schoenheimer*, 1939, 127, 329
Schoenheimer, Ratner, and Rittenberg, 1939, 127, 333
Schoenheimer, Rittenberg, and Keston, 1939, 127, 385
Rittenberg, Schoenheimer, and Keston, 1939, 128, 603
Schoenheimer, Ratner, and Rittenberg, 1939, 130, 703
Bloch and Schoenheimer, 1939, 131, 111
Clutton, Schoenheimer, and Rittenberg, 1940, 132, 227
Ratner, Schoenheimer, and Rittenberg, 1940, 134, 653
Ratner, Rittenberg, Keston, and Schoenheimer, 1940, 134, 665
—, fasting effect, *Chambers, Chandler, and Barker*, 1939, 131, 95
—, isotopes as indicators, *Schoenheimer and Rittenberg*, 1939, 127, 285
Metaphosphoric acid and, combination, *Perlmann*, 1941, 137, 707
—, reaction, *Briggs*, 1940, 134, 261
Methionine-free, casein conversion, *Toennies*, 1942, 145, 667
2-Methylthiazoline properties, relation, *Linderstrøm-Lang and Jacobsen*, 1941, 137, 443
Milk amino acids, distribution, *Beach, Bernstein, Hoffman, Teague, and Macy*, 1941, 139, 57
—, hydroxyglutamic acid, *Nicolet and Shinn*, 1942, 142, 139
Molecules, electron micrographs, *Stanley and Anderson*, 1942, 146, 25
—, glomerular membranes, passage, *Bott and Richards*, 1941, 141, 291
—, shape, *Neurath, Cooper, and Erickson*, 1941, 138, 411
Mosaic virus, latent, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
—, —, properties, *Loring*, 1938, 126, 455
—, —, —, ultracentrifugal analysis, *Wyckoff*, 1939, 128, 729

Protein(s)—continued:

- Native and urea-denatured, crystalline papain action, comparison, *Lineweaver and Hoover*, 1941, 137, 325
—, viscosity and diffusion, *Neurath, Cooper, and Erickson*, 1941, 138, 411
Nitrogen, denaturation effect, *Hendrix and Dennis*, 1938, 126, 315
Non-antigenic, blood serum, preparation, *Arnou, Kazal, and De Falco*, 1942, 145, 347
Nucleo-. See Nucleoprotein
Oats, germinating, synthesis, *Albaum and Cohen*, 1943, 149, 19
Organs, metabolism, pregnancy and lactation, *Poo, Lew, and Addis*, 1939, 128, 69
Papilloma virus, molecular size, shape, and homogeneity, *Neurath, Cooper, Sharp, Taylor, Beard, and Beard*, 1941, 140, 293
Peanut, threonine, serine, cystine, and methionine, *Brown*, 1942, 142, 299
Peptide bonds, hydrolysis, catalysis, *Steinhardt*, 1941, 141, 995
Properties, nomogram, *Wyman and Ingalls*, 1943, 147, 297
Radioactive sulfur distribution, dietary methionine, radioactive sulfur-containing, ingestion effect, *Tarver and Schmidt*, 1942, 146, 69
—, —, —, radioactive sulfur, ingestion effect, *Tarver and Schmidt*, 1942, 146, 69
Ring spot virus, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
Seleniferous, alkaline solutions, decomposition, *Painter and Franke*, 1940, 134, 557
Seminal plasma, *Ross, Moore, and Miller*, 1942, 144, 667
Serine, alkali effect, *Nicolet, Shinn, and Saidel*, 1942, 142, 609
Silk, hydroxyamino acids, *Nicolet and Saidel*, 1941, 139, 477
Soluble, isoelectric point, determination, *Jaffé*, 1943, 148, 185

Protein(s)—continued:

- Solutions, carbonic acid dissociation constant, first, *Danielson, Chu, and Hastings*, 1939, 131, 243
- , equilibrium, heterogeneous, *Joseph*, 1938, 126, 389
- Sulfhydryl groups, *Greenstein*, 1939, 128, 233
1939, 130, 519
- —, urease reversible inactivation, relation, *Hellerman, Chinard, and Deitz*, 1943, 147, 443
- Sulfur, *Lindstrom and Sandstrom*, 1941, 138, 445
- Threonine, alkali effect, *Nicolet, Shinn, and Saidel*, 1942, 142, 609
- Thromboplastic, lung, isolation, *Chargaff, Moore, and Bendich*, 1942, 145, 593
- Thymus nucleate mixtures, colloid osmotic pressure, *Greenstein*, 1943, 150, 107
- Tissue, amino acids, *Beach, Munks, and Robinson*, 1943, 148, 431
- , —, phenylpyruvic oligophrenia, *Block, Jervis, Bolling, and Webb*, 1940, 134, 567
- , metabolism, pregnancy and lactation, *Poo, Lew, and Addis*, 1939, 128, 69
- Tobacco mosaic, *Martin, Balls, and McKinney*, 1939, 130, 687
- — virus, amino acids, determination, *Ross*, 1941, 138, 741
- — —, — acids, fractionation, *Ross*, 1942, 143, 685
- — —, solution, diffusion, *Neurath and Saum*, 1938, 126, 435
- — —, —, viscosity, *Lauffer*, 1938, 126, 443
- — —, sulfur distribution, *Ross*, 1940, 136, 119
- — —, viscosimetry, *Frampton*, 1939, 129, 233
- Total, blood serum, determination, biuret reaction, *Kingsley*, 1939, 131, 197
- Tryptophane-free, casein conversion, *Toennies*, 1942, 145, 667

Protein(s)—continued:

- Tuberculin, nucleic acid and polysaccharide removal, *Seibert*, 1940, 133, 593
- , x-ray studies, *Spiegel-Adolf, Seibert, and Henny*, 1941, 137, 503
- Urine, analysis, *Murrill, Block, and Newburgh*, 1940, 133, 521
- , trichloroacetic acid-soluble, *Beckman, Hiller, Shedlovsky, and Archibald*, 1943, 148, 247
- Virus, rabbit papilloma, electrophoresis, *Sharp, Taylor, Beard, and Beard*, 1942, 142, 193
- Wheat, crystalline, phosphatide reversal, antimicrobial action, *Woolley and Krampitz*, 1942, 146, 273
- Proteinase: Brain, *Kies and Schwimmer*, 1942, 145, 685
- Crystalline, papaya latex, *Jansen and Balls*, 1941, 137, 459
- Intracellular, activation, *Irving, Fruton, and Bergmann*, 1941, 139, 569
- Kinetics, specificity problems, application, *Irving, Fruton, and Bergmann*, 1941, 138, 231
- Proteolysis: Aerobic and anaerobic, comparison, *Irving, Fruton, and Bergmann*, 1942, 144, 161
- Blood plasma, tumor or embryonic growth, *Weil and Russell*, 1938, 126, 245
- Cosubstrates, *Behrens and Bergmann*, 1939, 129, 587
- Enzymes, histamine and, *Rocha e Silva and Andrade*, 1943, 149, 9
- , spleen, *Fruton and Bergmann*, 1939, 130, 19
- , —, and kidney, *Fruton, Irving, and Bergmann*, 1941, 141, 763
- , tissue, *Fruton and Bergmann*, 1939, 130, 19
- Fruton, Irving, and Bergmann*, 1941, 138, 249
1941, 141, 763
- Irving, Fruton, and Bergmann*, 1942, 144, 161
- , tumors, specificity, *Fruton, Irving, and Bergmann*, 1940, 132, 465

- Proteus morganii:** Metabolism, pantothenic acid effect, *Dorfman, Berkman, and Koser*, 1942, 144, 393
- Pantothenic acid determination, use, *Pelczar and Porter*, 1941, 139, 111
- Prothrombin:** Blood plasma, hemorrhagic concentrate determination by, sweet clover disease, *Campbell, Smith, Roberts, and Link*, 1941, 138, 1
- —, 3,3'-methylenebis(4-hydroxycoumarin), effect, *Overman, Stahmann, Sullivan, Huebner, Campbell, and Link*, 1942, 142, 941
- —, sulfaguanidine effect, *Black, Overman, Eloekjem, and Link*, 1942, 145, 137
- 3,3'-Methylenebis(4-hydroxycoumarin) action, 2-methyl-1,4-naphthoquinone and l-ascorbic acid effect, *Overman, Stahmann, and Link*, 1942, 145, 155
- Purification, *Seegers*, 1940, 136, 103
- Seegers and Smith*, 1941, 140, 677
- Purified, properties, *Seegers*, 1940, 136, 103
- Thrombin, conversion, radioactive phosphorus as indicator, *Chargaff, Ziff, and Cohen*, 1940, 135, 351
- Prothrombinemia:** See also Hypoprothrombinemia
- Protoporphyrin:** *Grinstein and Watson*, 1943, 147, 667, 671, 675
- Blood, determination, photoelectric and fluorophotometric, *Grinstein and Watson*, 1943, 147, 675
- Coproporphyrin, conversion, liver, *Watson, Pass, and Schwartz*, 1941, 139, 583
- Salzburg and Watson*, 1941, 139, 593
- Fate, bile-renal fistulae, *Watson, Pass, and Schwartz*, 1941, 139, 583
- Iron, nitrogenous bases, coordination, *Davies*, 1940, 135, 597
- IX, feces, normal and anemic rats,** isolation, *Schultze*, 1942, 142, 89
- , hemoglobin, purification, *Grinstein and Watson*, 1943, 147, 667
- Protoporphyrin—continued:**
- Mesoporphyrin, conversion, micro, *Grinstein and Watson*, 1943, 147, 671
- Phyllochromogen, *Ross*, 1939, 127, 163
- Protoveratrine:** *Jacobs and Craig*, 1943, 149, 271
- Alkamine, *Jacobs and Craig*, 1943, 149, 271
- Dehydrogenation, *Craig and Jacobs*, 1942, 143, 427
- Protoverine:** *Jacobs and Craig*, 1943, 149, 271
- Protozoa:** See also *Colpidium*, *Plasmodium*, *Trypanosoma*
- Protyrosinase:** Activators, grasshopper egg oil, unimolecular films and fractions, *Allen, Boyd, and Bodine*, 1942, 143, 785
- Provitamin: A,** watermelon, *Zechmeister and Polgár*, 1941, 139, 193
- Pseudoglobulin:** Blood serum, denaturation and reversal, *Neurath, Cooper, and Erickson*, 1942, 142, 265
- —, papain effect, *Petermann*, 1942, 144, 607
- GI, blood serum, electrophoresis,** *Sharp, Cooper, and Neurath*, 1942, 142, 203
- Pseudohemoglobin:** Blood cells, red, differentiation by, *Barkan and Walker*, 1940, 135, 803
- Iron, determination, o-phenanthroline use, *Barkan and Walker*, 1940, 135, 37
- Ptyalin:** Pituitary gonadotropic activity, effect, *McShan and Meyer*, 1938, 126, 361
- Purine(s):** Decomposition, *Clostridium aciduri* and *Clostridium cylindrosporum*, *Barker and Beck*, 1941, 141, 3
- Determination, *Hitchings and Fiske*, 1941, 140, 491
- Nucleotides and nucleosides, blood and tissues, determination, *Kerr*, 1940, 132, 147
- Sulfonamide action, effect, *Harris and Kohn*, 1941, 141, 989

Pyloric obstruction: Blood cell electrolyte equilibrium, diphosphoglyceric acid rôle, *Rapoport and Guest*, 1939, 131, 675

Pyreantha angustifolia: Fruit, pro- γ -carotene and polycopene, *Zechmeister and Schroeder*, 1942, 144, 315

Pyrene: Growth effect, *White and White*, 1939, 131, 149

Pyridine: Analogue, thiamine deficiency disease production, *Woolley and White*, 1943, 149, 285

Cytochrome *c* derivatives, chemical constitution, *Drabkin*, 1942, 146, 605

Diphospho-. See Diphosphopyridine

Hemoglobin derivatives, chemical constitution, *Drabkin*, 1942, 146, 605

Nucleotides, synthesis from nicotinic acid, *in vitro*, blood cell, red, effect, *Kohn and Klein*, 1940, 135, 685

—, tissue inactivation, *in vitro*, *Handler and Klein*, 1942, 143, 49
1942, 144, 453

—, yeast, preparation, *Klein*, 1940, 134, 43

Phyllochromogen, *Ross*, 1939, 127, 163

Polarographic study, *Tompkins and Schmidt*, 1942, 143, 643

Triphospho-, nucleotide, determination, micro-, *Haas, Harrer, and Hogness*, 1942, 142, 835

Pyridine compound(s): Urine nicotinic acid excretion, influence, *Melnick, Robinson, and Field*, 1940, 136, 131

Pyridine coproporphyrin: I, spectrophotometry, *Clark and Perkins*, 1940, 135, 643

Pyridoxine: Anemia from, *McKibbin, Schaefer, Frost, and Elvehjem*, 1942, 142, 77

Bound, biological materials, *Siegel, Melnick, and Oser*, 1943, 149, 361

Conjugated, rice bran concentrates, *Scudi*, 1942, 145, 637

Pyridoxine—continued:

Deficiency, tryptophane metabolism, xanthurenic acid effect, *Lepkovsky, Roboz, and Haagen-Smit*, 1943, 149, 195

Determination, biological, *Conger and Elvehjem*, 1941, 138, 555

—, colorimetric, Scudi method, adaptation, *Bird, Vandenberg, and Emmett*, 1942, 142, 317

—, *Neurospora* use, *Stokes, Larsen, Woodward, and Foster*, 1943, 150, 17

Foods, determination, *Bina, Thomas, and Brown*, 1943, 148, 111

Light effect, *Hochberg, Melnick, Siegel, and Oser*, 1943, 148, 253

Metabolite, natural products, occurrence, *Snell, Guirard, and Williams*, 1942, 143, 519

Tissue catalase, effect, *Lepkovsky and Parsons*, 1943, 149, 281

Urine pigment-producing compound, green, relation, *Lepkovsky and Nielsen*, 1942, 144, 135

See also Vitamin B₆

Pyrimidine: Vitamin B₁, photochemistry and spectroscopy, *Uber and Verbrugge*, 1940, 134, 273

Pyrimidinedesoxynucleoside(s): Diphosphoric esters, *Levene*, 1938, 126, 63

Pyrophosphate: Liver respiration, effect, *Feinstein and Stare*, 1940, 135, 393

Pyrrole: Amines and amino acid isomers, oxidation, effect, *Bernheim, Bernheim, and Michel*, 1938, 126, 273

—Containing pigments, hemoglobin synthesis, relation, *Kohler, Elvehjem, and Hart*, 1939, 128, 501

Pyrrolidonecarboxylic acid: Formation, glutathione hydrolysis, enzymatic, kidney extract, hydrogen ion concentration effect, *Woodward and Reinhart*, 1942, 145, 471

Pyruvate: Alcohol and, oxidation-reduction, coupled, *in vivo*, *Westerfeld, Stotz, and Berg*, 1943, 149, 237

Blood composition, injection effect, *Bueding and Goldfarb*, 1943, 147, 33

Pyruvate—continued:

- Blood, diabetes, glucose and insulin effect, *Klein*, 1942, 145, 35
- , glucose ingestion and thiamine deficiency, effect, *Bueding, Stein, and Wortis*, 1941, 140, 697
- Condensation reactions, thiamine effect, *Barron, Lyman, Lipton, and Goldinger*, 1941, 141, 957
- Ethyl alcohol metabolism, rôle, *Westerfeld, Stotz, and Berg*, 1942, 144, 657
- Glycogen formation from, *in vitro*, radioactive carbon dioxide effect, *Buchanan, Hastings, and Nesbett*, 1942, 145, 715
- Lactate-, blood, relation, thiamine deficiency, *Stotz and Bessey*, 1942, 143, 625
- Metabolism, liver, pantothenic acid and biotin effect, *Pilgrim, Axelrod, and Elvehjem*, 1942, 145, 237
- Muscle, working, vitamin B₁ effect, *Bollman and Flock*, 1939, 130, 565
- Urine, thiamine effect, *Harper and Deuel*, 1941, 137, 233
- Pyruvic acid:** *Friedemann and Haugen*, 1942, 144, 67
1943, 147, 415
- Aceto-, metabolism, *Lehninger*, 1943, 148, 393
- Acetylmethylcarbinol formation from, bacterial enzyme preparation use, *Silverman and Werkman*, 1941, 138, 35
- Blood, bisulfite-binding substances, relation, *Klein*, 1940, 135, 143
- , determination, acetoacetic acid effect, *Klein*, 1941, 137, 311
- , —, blood collection, *Friedemann and Haugen*, 1942, 144, 67
- , lactic acid and, exercise effect, *Friedemann and Barborka*, 1941, 141, 993
- , *Plasmodium knowlesi* effect, *Wendel and Kimball*, 1942, 145, 343
- , removal *in vitro*, *Bueding and Goodhart*, 1941, 141, 931
- , stabilization and determination, *Bueding and Wortis*, 1940, 133, 585

Pyruvic acid—continued:

- Brain, oxidation and phosphorylation, *Ochoa*, 1941, 138, 751
- Determination, acetoacetic acid elimination in, *Elgart and Nelson*, 1941, 138, 443
- Dissimilation, *Clostridium butylicum* preparations, *Koepsell and Johnson*, 1942, 145, 379
- Formation, glucose ingestion effect, *Bueding, Stein, and Wortis*, 1941, 137, 793
- , insulin and pancreatectomy, effect, *Bueding, Fazekas, Herrlich, and Himwich*, 1943, 148, 97
- Indole-. See Indolepyruvic acid
- Liver, dissimilation, carbon dioxide fixation, *Wood, Werkman, Hemingway, and Nier*, 1942, 142, 31
- Metabolism, tissues and bacteria, effect, *Barron and Lyman*, 1939, 127, 143
- Oxidation product, phosphorylated, *Lipmann*, 1940, 134, 463
- Phospho-, dephosphorylation, carbohydrate breakdown, relation, *Meyerhof and Junowicz-Kocholaty*, 1942, 145, 443
- Urine, thiamine effect, *Shils, Day, and McCollum*, 1941, 139, 145
- Pyruvic carboxylase:** Tissue, *Green, Westerfeld, Vennesland, and Knox*, 1941, 140, 683

Q

- Quartz:** Fiber, balance, *Lowry*, 1941, 140, 183
- Particles, blood serum proteins, electric mobilities, film formation, relation, *Moyer and Gorin*, 1940, 133, 605
- Quercetin:** -Like substances, determination, *Weatherby and Cheng*, 1943, 148, 707
- Quinine:** Blood and biological materials, determination, micro-, *Kyker, Webb, and Andrews*, 1941, 139, 551
- Quinone(s):** Benzo-, series, vitamin K activity, *Ansbacher and Fernholz*, 1939, 131, 399

Quinone(s)—*continued*:

- Naphtho-, vitamin K₁-associated, determination, reduction-oxidation method, *Trenner and Bacher*, 1941, 137, 745
- Phenanthrene-, condensation, diaminocarboxylic acid from biotin, *Hofmann, Kilmer, Melville, du Vigneaud, and Darby*, 1942, 145, 503
- α -Toco-, vitamin E, relation, *Emerson, Emerson, and Evans*, 1939, 131, 409

- Tocopheryl-, determination, colorimetric oxidation-reduction, *Scudis and Buhs*, 1942, 146, 1
- α -Tocopheryl-, muscle dystrophy, relation, *Golumbic and Mattill*, 1940, 135, 339
- Vitamin K₁-associated, determination, reduction-oxidation method, *Trenner and Bacher*, 1941, 137, 745

R

- Ragweed**: Pollen extract, electrophoretic patterns, *Abramson and Moore*, 1942, 144, 579
- Raney catalyst**: *dl*-Leucine and *l*-leucine esters, reaction, *Okakimian, Christman, Kuna, and Levene*, 1940, 134, 151
- Phenylaminoacetic acid esters and phenylalanine esters, reaction, *Okakimian, Kuna, and Levene*, 1940, 135, 91
- Ray**: *See also* Ultraviolet radiation
- Reducing group(s)**: Egg albumin and urease, *Hellerman, Chinard, and Deitz*, 1943, 147, 443
- , determination, porphyrindin use, *Brand and Kassell*, 1940, 133, 437
- Reductase**: Cytochrome, *Haas, Harrer, and Hogness*, 1942, 143, 341
- *c*, *Haas, Horecker, and Hogness*, 1940, 136, 747
- , isolation, inhibition and inactivation, and reaction with oxygen, *Haas, Harrer, and Hogness*, 1942, 143, 341
- Renal**: *See* Kidney

- Renin**: Activator, angiotonin formation, enzymatic, *Plenil and Page*, 1943, 147, 135
- , nature, *Plenil, Page, and Davis*, 1943, 147, 143
- Angiotonin formation, enzymatic, *Plenil and Page*, 1943, 147, 135
- Purification and properties, *Helmer and Page*, 1939, 127, 757
- Rennin**: Pressure effect, *Matthews, Dow, and Anderson*, 1940, 135, 697
- Respiration**: *Chlorella pyrenoidosa*, inhibition, *Green, McCarthy, and King*, 1939, 128, 447
- Gases, determination, apparatus, *Scholander*, 1942, 146, 159
- Respiratory enzyme(s)**: Tissue, determination, *Schneider and Potter*, 1943, 149, 217
- DuBois and Potter*, 1943, 150, 135
- Respiratory ferment**: Yeast, absorption spectrum, *Melnick*, 1941, 141, 269
- Respiratory metabolism**: Malaria parasites, *Wendell*, 1943, 148, 21
- Respiratory pigment**: *Urechis* eggs, *Horowitz and Baumberger*, 1941, 141, 407
- Respiratory quotient**: -Reducing substances, pituitary, anterior, fractions, preparation and assay, *Greaves, Freiberg, and Johns*, 1940, 133, 243
- Retina**: Pasteur enzyme, spectrum, *Stern and Melnick*, 1941, 139, 301
- Rhamnitol**: *l*-, 1,3,4,5-tetramethyl, synthesis, *Tipson and Levene*, 1939, 130, 235
- Rhamnose**: *l*-, tetraacetyl, new form, *Tipson*, 1939, 130, 55
- Rheum hybridum**: *See* Rhubarb
- Rhizobium**: Metabolism, *Hoover and Allison*, 1940, 134, 181
- Rhubarb**: Leaf, excised, carbon loss during culture, *Vickery and Pucher*, 1939, 128, 685
- , —, organic acids, behavior during culture, *Pucher, Wakeman, and Vickery*, 1938, 126, 43
- Rib-grass**: Strain, tobacco mosaic virus, sulfur, *Knight*, 1943, 147, 663

Riboflavin: Biological fluids, determination, fluorometric, *Najjar*,

1941, 141, 355

Blood, *Strong, Feeney, Moore, and Parsons*, 1941, 137, 363— regeneration, effect, *Spector, Maass, Michaud, Elvehjem, and Hart*,

1943, 150, 75

— Boron complex, water-soluble, *Frost*, 1942, 145, 693Deficiency, liver succinoxidase system, *Axelrod, Swingle, and Elvehjem*,

1942, 145, 297

—, succinoxidase system, *Axelrod, Potter, and Elvehjem*, 1942, 142, 85Determination, biological, *Wagner, Axelrod, Lipton, and Elvehjem*,

1940, 136, 357

—, microbiological, *Scott, Randall, and Hessel*, 1941, 141, 325—, —, factors affecting, *Wegner, Kemmerer, and Fraps*,

1942, 144, 731

—, —, sample preparation, effect, *Wegner, Kemmerer, and Fraps*,

1942, 146, 547

—, polarographic, *Lingane and Davis*, 1941, 137, 567Flavin-adenine dinucleotide synthesis from, blood cells, effect, *Klein and Kohn*,

1940, 136, 177

Foodstuffs, determination, fluorometric, *Hodson and Norris*,

1939, 131, 621

Liver, *Supplee, Jensen, Bender, and Kahlenberg*, 1942, 144, 79— xanthine oxidase, effect, *Axelrod and Elvehjem*,

1941, 140, 725

Perspiration, *Tennent and Silber*, 1943, 148, 359Thiamine and, metabolism relation, *Sure and Ford*, 1942, 146, 241Tissue *d*-amino acid oxidase, effect, *Axelrod, Sober, and Elvehjem*,

1940, 134, 749

—, animal, determination, *in vitro*, *Van Duyne*, 1941, 139, 207— metabolism, effect, *Hastings, Muus, and Bessey*, 1939, 129, 295**Riboflavin—continued:**Urine, *Strong, Feeney, Moore, and Parsons*, 1941, 137, 363—, determination, fluorometric, *Najjar*, 1941, 141, 355See also Vitamin B₂**Ribonuclease:** Crystalline, absorption spectrum, *Uber and Ellis*,

1941, 141, 229

—, ribonucleic acid, action, *Allen and Eiler*, 1941, 137, 757—, — hydrolysis by, mononucleotides, isolation, *Loring and Carpenter*,

1943, 150, 381

Ribonucleic acid(s): Electrophoretic mobilities, *Cohen*, 1942, 146, 471Hydrolysis, enzymatic, chemical constitution, relation, *Bolomey and Allen*,

1942, 144, 113

Mononucleotides from, hydrolysis by ribonuclease, crystalline, *Loring and Carpenter*,

1943, 150, 381

Nucleotides, union, *Tipson and Levene*, 1939, 127, 105Ribonuclease, crystalline, action, *Allen and Eiler*, 1941, 137, 757**Ribonucleodepolymerase:** *Schmidt and Levene*, 1938, 126, 423**Ribose:** *d*-, identification as benzimidazole derivatives, *Dimler and Link*,

1943, 150, 345

Desoxy-, electrophoretic mobilities, *Cohen*, 1942, 146, 471**Riboside(s):** Pyrimidinedesoxy-, diphosphoric esters, *Levene*, 1938, 126, 63**Rice:** Bran concentrates, pyridoxine, conjugated, *Scudi*, 1942, 145, 637**Rice factor:** Carbohydrate component, *Almquist, Mecchi, Stokstad, and Manning*,

1940, 134, 465

Stokstad, Almquist, Mecchi, Manning, and Rogers, 1941, 137, 373Glycine component, nature, *Almquist and Mecchi*, 1940, 135, 355Identification, *Almquist, Stokstad, Mecchi, and Manning*,

1940, 134, 213

Almquist, Mecchi, Stokstad, and Manning, 1940, 134, 465*Almquist and Mecchi*, 1940, 135, 355

- Rickets:** Anemia, relation, *Fuhr and Steenbock*, 1943, 147, 71
 Blood cell phosphorus, organic acid-soluble and inorganic, diphosphoglycerate, and adenosine triphosphate, *Rapoport and Guest*, 1938, 126, 749
 Phosphorus metabolism, vitamin D effect, radioactive isotopes as indicator, *Cohn and Greenberg*, 1939, 130, 625
 Skeleton phosphorus turnover, pregnancy, effect, *Manly and Levy*, 1941, 139, 35
 Tissue phosphatase action, *Truhlar, Drechter, McGuire, and Falk*, 1939, 127, 345
Ring spot: Virus, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
 —, nucleic acid and protein, absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
 —, tobacco, isolation and properties, *Stanley*, 1939, 129, 405
 —, —, recovered plants, isolation, *Stanley*, 1939, 129, 429
Rose, Mary Swartz: Obituary, *Sherman*, 1941, 140, 687
Rubijervine: *Jacobs and Craig*, 1943, 148, 41

S

- Saccharic acid:** Benzimidazole derivative, identification, *Lohmar, Dimler, Moore, and Link*, 1942, 143, 551
Saccharoid(s): Blood, glucuronic acid relation, *Fashena and Stiff*, 1941, 137, 21
Saccharolactone: Amine-precipitating reagent, *Kurtz and Wilson*, 1939, 129, 693
Salicylic acid: Hypoprothrombinemia, effect, *Link, Overman, Sullivan, Huebner, and Scheel*, 1943, 147, 463
Saliva: Group-specific substances, *Landsteiner and Harte*, 1941, 140, 673
Salmon: Pepsin, crystalline, preparation and properties, *Norris and Elam*, 1940, 134, 443
 —, specificity, *Fruton and Bergmann*, 1940, 136, 559
Salt(s): Amino acids and, interaction, *Joseph*, 1939, 130, 203
 Inorganic. See Inorganic salts
 Liver tissue suspension respiration, effect, *Elliott and Elliott*, 1939, 127, 457
Sarcoma: Fowl, polysaccharide, *Kabat*, 1939, 130, 143
 Lympho-, phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
 Mammary, phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
 180, phospholipid metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1939, 128, 631
Sarcosine: Demethylation, biological, glycine, relation, *Bloch and Schoenheimer*, 1940, 135, 99
 —, oxidative, glycine, relation, *Handler, Bernheim, and Klein*, 1941, 138, 211
 Oxidase, *Bernheim and Bernheim*, 1942, 143, 391
Scallop: Muscle, octopine precursor, *Irvin and Wilson*, 1939, 127, 575
Scarlet fever: Toxin, chemistry, *Barron, Dick, and Lyman*, 1941, 137, 267
 —, erythrogenic, isolation and properties, electrophoretic, *Krejci, Stock, Sanigar, and Kraemer*, 1942, 142, 785
 —, purification, *Stock*, 1942, 142, 777
Schizophrenia: Blood serum lipids, testosterone effect, *Randall*, 1940, 133, 137
Scurvy: 2-Keto-l-gulonic acid, effect, *Ball*, 1940, 134, 177
Seal: Muscle, metabolism, diving effect, *Scholander, Irving, and Grinnell*, 1942, 142, 431

- Season:** Blood, effect, *Dill, Wilson, Hall, and Robinson*, 1940, 136, 449
- Seedling(s):** Etiolated, amide metabolism, *Vickery and Pucher*, 1943, 150, 197
- Selachyl alcohol:** Natural, configuration, *Baer and Fischer*, 1941, 140, 397
- Selenium:** Cevine dehydrogenation, *Craig and Jacobs*, 1939, 129, 79
1941, 139, 263
- Containing amino acid complex, *Astragalus pectinatus*, isolation, *Horn and Jones*, 1941, 139, 649
- Excretion, *p*-bromobenzene effect, *Mozon, Schaefer, Lardy, DuBois, and Olson*, 1940, 132, 785
- Proteins containing, alkaline solutions, decomposition, *Painter and Franke*, 1940, 134, 557
- Radio-, sodium selenate distribution and excretion, study with, *McConnell*, 1941, 141, 427
- Respiratory excretion, radioactive isotope in study, *McConnell*, 1942, 145, 55
- Selenium compound(s):** Volatile, excretion, sodium selenite administration effect, *Schultz and Lewis*, 1940, 133, 199
- Semen:** Plasma, proteins, *Ross, Moore, and Miller*, 1942, 144, 667
- Preservation, *Phillips*, 1939, 130, 415
See also Spermatozoa
- Serine:** Brain phosphatides, isolation, *Chargaff and Ziff*, 1941, 140, 927
- Deamination, *Bacterium coli* rôle, *Chargaff and Sprinson*, 1943, 148, 249
- Dehydrase, nature, *Binkley*, 1943, 150, 261
- Determination, colorimetric, *Boyd and Logan*, 1942, 146, 279
- , periodate use, *Nicolet and Shinn*, 1941, 139, 687
- Dietary, effect, *Fishman and Artom*, 1942, 145, 345
- , fate, *Stetten*, 1942, 144, 501
- , liver lipids, effect, *Stetten and Grail*, 1942, 144, 175
- Serine—continued:**
- dl*-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville*, 1940, 133, 109
- l*-, peptides, synthesis, *Fruton*, 1942, 146, 463
- , preparation, protein hydrolysates, *Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- , silk fibroin, isolation, *Stein, Moore, and Bergmann*, 1941, 139, 481
- Liver cysteine formation from, *Binkley and du Vigneaud*, 1942, 144, 507
- Peanut proteins, *Brown*, 1942, 142, 299
- Peptide combination, lability to alkali, *Nicolet and Shinn*, 1941, 140, 685
- Phosphatidyl, brain cephalin, separation, *Folch*, 1942, 146, 35
- , —, serine component identification, *Folch*, 1941, 139, 973
- Proteins, alkali effect, *Nicolet, Shinn, and Saidel*, 1942, 142, 609
- Synthesis, *Wood and du Vigneaud*, 1940, 134, 413
- Serum:** Blood. *See* Blood serum
- Sex:** Acetone body utilization, influence, *Grayman, Nelson, and Mirsky*, 1939, 131, 121
- Glucose tolerance, normal and fatty livers, effect, *Deuel and Davis*, 1942, 146, 649
- Hormones, *Achlya*, *Raper and Haagen-Smit*, 1942, 143, 311
- , crystalline, blood lipids, bird, effect, *Entenman, Lorenz, and Chaikoff*, 1940, 134, 495
- , male, urine and blood, *McCullagh and Osborn*, 1938, 126, 299
- , *See also* Androgenic substance, Androstanol-3(β)-one, Androsterone, etc.
- Shock:** Acidosis, effect, *Allison, Cole, Leatham, Nastuk, and Anderson*, 1943, 147, 255
- Hemorrhage, tissue metabolism, effect, *Beecher and Craig*, 1943, 148, 883
- Urine, effect, *Allison, Cole, Leatham, Nastuk, and Anderson*, 1943, 147, 255

Silk: Fibroin, *l*-serine isolation, *Stein, Moore, and Bergmann*,

1941, 139, 481

Proteins, hydroxyamino acids, *Nicolet and Saidel*,

1941, 139, 477

Silk oak: Flowers, β -carotene source, *Zechmeister and Polgár*,

1941, 140, 1

Silver iodate: Purity tests, *Sendroy*,

1939, 127, 483

Silver salt(s): Organic acids, bromoacetyl sugars, action, *Tipson*,

1939, 130, 55

Skatole: Color reaction, blood fructose determination, use in, *Reinecke*,

1942, 142, 487

Skeleton: Phosphorus turnover, pregnancy, diet effect, *Manly and Levy*,

1941, 139, 35

Skin: Cholesterol, ultraviolet irradiation effect, *Knudson, Sturges, and Bryan*,

1939, 128, 721

Human, chemistry, *Wilkerson and Tulane*,

1939, 129, 477

—, methionine, *Wilkerson and Tulane*,

1939, 129, 477

Mucopolysaccharides, *Meyer and Chaffee*,

1941, 138, 491

Slime: Hagfish, protein, fibrous, *Ferry*,

1941, 138, 263

Sodium: Biological material, determination, micro-, spectrochemical, *Duffendack, Thomson, Lee, and Koppius*,

1938, 126, 1

Blood cell, red, *Streef*,

1939, 129, 661

—, —, permeability, *Kurnick*,

1941, 140, 581

—, determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*,

1942, 145, 85

—, distribution, *Snyder and Katzenbogen*,

1942, 143, 223

— serum, determination, phosphorus effect, *Hald*,

1939, 130, 133

—, —, spectrochemical, *Steadman*,

1941, 138, 603

Bone, adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*,

1943, 148, 321

Sodium—continued:

—Deficient diet, mineral metabolism, effect, *Orent-Keiles and McCollum*,

1940, 133, 75

Dentin, adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*,

1943, 148, 321

Depletion, muscle and blood serum potassium, effect, *Miller*,

1943, 147, 121

Determination, *Consolazio and Dill*,

1941, 137, 587

—, colorimetric, micro-, manganous uranyl acetate use, *Leva*,

1940, 132, 487

—, phosphate presence, *Sobel, Kraus, and Kramer*,

1941, 140, 501

Enamel and hydroxyapatite, adsorption, radioactive isotope in study, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*,

1943, 148, 321

Insoluble, bone, nature, *Hodge, Koss, Ginn, Falkenheim, Gavett, Fowler, Thomas, Bonner, and Dessauer*,

1943, 148, 321

—Low diets, sodium metabolism, radioactive isotopes in study, *Greenberg, Campbell, and Murayama*,

1940, 136, 35

Muscle, frog, *Steinbach*,

1940, 133, 695

Radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler*,

1940, 135, 165

—, placenta, transfer, *Pohl and Flezner*,

1941, 139, 163

Tissue, determination, micro-, titrimetric, *Clark, Levitan, Gleason, and Greenberg*,

1942, 145, 85

Urine, glomerulus, *Necturus, Bott*,

1943, 147, 653

Sodium bicarbonate: Alkalosis, blood serum electrolytes, *Kirsner*,

1942, 145, 219

Sodium chloride: Absorption, intestine, monoiodoacetic acid effect, *Klinghoffer*,

1938, 126, 201

Sodium chloride—continued:

- Carbohydrate and mineral metabolism, adrenalectomy, effect, *Kendall, Flock, Bollman, and Mann*, 1938, 126, 697
- Glucose tolerance, diabetes, effect, *Orten and Devlin*, 1940, 136, 461
- Levels, vitamin B filtrate factors, deficiency, administration effect, *Ralli, Clarke, and Kennedy*, 1941, 141, 105
- Organic phosphate determination, King method, effect, *Rae and Eastcott*, 1939, 129, 255
- Vitamin B filtrate factors, deficiency, administration effect, *Ralli, Clarke, and Kennedy*, 1941, 141, 105
- Sodium cyanide:** Carotene stability, effect, *Pepkowitz*, 1943, 149, 465
- Sodium dehydroisoandrosterone sulfate:** Water and urine, determination, *Talbot, Ryan, and Wolfe*, 1943, 148, 593
- Sodium fluoride:** Blood glycolysis, effect, *Bueding and Goldfarb*, 1941, 141, 539
- Sodium β -glycerophosphate:** Hydrolysis, bone phosphatase, activation energy, *Bodansky*, 1939, 129, 197
- Sodium iodoacetate:** Blood glycolysis, effect, *Bueding and Goldfarb*, 1941, 141, 539
- Sodium pentothal:** Blood, determination, *Hellman, Shettles, and Stran*, 1943, 148, 293
- Sodium pregnanediol glucuronide:** *n*-Butanol and pregnancy urine, distribution, *Woolf, Vieregiver, and Allen*, 1942, 146, 323
- Urine, determination, micro-, *Venning*, 1938, 126, 595
- , pregnancy, determination, titrimetric, *Allen and Vieregiver*, 1941, 141, 837
- Sodium salicylate:** Urine metabolites, *Kapp and Coburn*, 1942, 145, 549
- Sodium selenate:** Body distribution and excretion, radioselenium in study, *McConnell*, 1941, 141, 427

Sodium selenite: Selenium compounds, volatile, excretion, administration effect, *Schultz and Lewis*,

1940, 133, 199

Soil bacillus: Bactericidal agent, fractionation, *Hotchkiss and Dubos*, 1940, 132, 791

— substances, properties, *Hotchkiss and Dubos*, 1940, 132, 793

See also *Actinomyces*, *Bacillus brevis*

Solanidine: Veratrine bases and, relationship, *Craig and Jacobs*, 1943, 149, 451

Sorbide: Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231

Sorbitan: Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231

Sorbitol: *d*-, fate, *Carr and Forman*, 1939, 128, 425

—, metabolism, *Blatherwick, Bradshaw, Ewing, Larson, and Sawyer*, 1940, 134, 549

Kidney excretion, *Smith, Finkelstein, and Smith*, 1940, 135, 231

Metabolism, *Todd, Myers, and West*, 1939, 127, 275

Ellis and Krantz, 1941, 141, 147

1,2,3,5,6-O-Pentamethyl-*d*-, *Levene and Kuna*, 1939, 127, 49

Toxicity, *Ellis and Krantz*, 1941, 141, 147

Sorbose: *l*-, fate, *Carr and Forman*, 1939, 128, 425

Soy bean: See *Bean*

Specific gravity: Blood serum, protein relation, *Schousboe*, 1939, 129, 371

Spectrophotometry: *Drabkin and Singer*, 1939, 129, 739

Drabkin, 1941, 140, 373, 387

1942, 142, 855

1942, 146, 605

Rosenthal and Drabkin, 1943, 149, 437

Spermatozoa: Cytochrome oxidase, *Zittle and Zitin*, 1942, 144, 99

Glycolysis, *Lardy and Phillips*, 1943, 148, 343

Iron, non-hemin and total, *Zittle and Zitin*, 1942, 144, 105

Spermatozoa—continued:

Lipids, sulfur, cystine, nitrogen, phosphorus, and nucleic acids, *Zittle and O'Dell*, 1941, 140, 899

Metabolism, *Lardy and Phillips*, 1941, 138, 195
1943, 148, 333

—, dinitrophenol and thyroxine effect, *Lardy and Phillips*, 1943, 149, 177

Methionine, *Zittle and O'Dell*, 1941, 141, 239

See also Semen

Spermidine: *Escherichia coli* growth, atabrine and, effect, *Silverman and Evans*, 1943, 150, 265

Sphingomyelin: Blood cell, red, stroma, *Thannhauser, Setz, and Benotti*, 1938, 126, 785

—, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671

— serum, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709

Body fluids, determination, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709

Occurrence, *Thannhauser and Reichel*, 1940, 135, 1

Tissue, *Thannhauser, Benotti, Walcott, and Reinstein*, 1939, 129, 717
Hunter, 1942, 144, 439

—, determination, *Thannhauser, Benotti, and Reinstein*, 1939, 129, 709

—, —, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671

—, occurrence and turnover, *Hunter and Levy*, 1942, 146, 577

Tumor, metabolism, *Haven and Levy*, 1941, 141, 417

Tumor-bearing rats, occurrence and turnover, *Hunter and Levy*, 1942, 146, 577

Sphingosine: Amides, synthesis, *Reichel and Thannhauser*, 1940, 135, 15

Chemical constitution, *Carter, Glick, Norris, and Phillips*, 1942, 142, 449

Dihydro-, brain and spinal cord, isolation, *Carter and Norris*, 1942, 145, 709

Sphingosine—continued:

Dihydro-, cerebroside containing, *Cysticercus* larvae, *Lesuk and Anderson*, 1941, 139, 457

Fats, synthesis, *Reichel and Thannhauser*, 1940, 135, 15

Lignoceryl-, fatty acid esters, synthesis, *Reichel and Thannhauser*, 1940, 135, 15

Spinach: Leucylpeptidase, *Berger and Johnson*, 1939, 130, 655

Spinal cord: *See* Cerebrospinal cord

Spinal fluid: *See* Cerebrospinal fluid

Spirographis: Hemin and hemochromogens, oxidation-reduction potentials, *Barron*, 1940, 133, 51

Spleen: Apoferritin, *Granick and Michaelis*, 1943, 147, 91

Cathepsin, *Fruton, Irving, and Bergmann*, 1941, 141, 763

—, nature, *Fruton, Irving, and Bergmann*, 1941, 138, 249

Cerebroside, glucose-containing, isolation, *Halliday, Deuel, Tragerman, and Ward*, 1940, 132, 171

Enzymes, proteolytic, *Fruton and Bergmann*, 1939, 130, 19

Fruton, Irving, and Bergmann, 1941, 141, 763

Ferritin, properties, *Granick*, 1942, 146, 451

Niemann-Pick disease, *Chargaff*, 1939, 130, 503

Spongins: Amino acids, *Block and Bolling*, 1939, 127, 685

Squash: *See also* *Cucurbita pepo*

Squid: Muscle, nitrogenous extractives, *Irvin and Wilson*, 1939, 127, 565

Staphisine: *Jacobs and Craig*, 1941, 141, 67

Staphylococcus aureus: Carbohydrate metabolism, *Friedemann*, 1939, 130, 61

Starch: Blood sugar, liver glycogen, and absorption, temperature effect, *Raferty and MacLachlan*, 1941, 140, 167

Hydrolysis, blood amylase, *Morris*, 1943, 148, 271

Phosphorylase, potato, *Green and Stumpf*, 1942, 142, 355

Starch—continued:

Soluble, wheat amylase, action, *Stamberg and Bailey*, 1938, 126, 479

Suspensions, viscosity and concentration, relation, *Davison*,

1942, 144, 419

Statistics: Biochemical variables, normal men, *Jellinek and Looney*,

1939, 128, 621

Stearic acid: Formation rate, body, *Bernhard and Schoenheimer*,

1940, 133, 713

Palmitic acid conversion, *Stetten and Schoenheimer*,

1940, 133, 329

Steroid(s): *Heard and McKay*,

1939, 131, 371

Heard and Hoffman, 1941, 138, 651

1941, 141, 329

Heard, Bauld, and Hoffman,

1941, 141, 709

Adrenocortical, liver arginase, effect, *Fraenkel-Conrat, Simpson, and Evans*,

1943, 147, 99

Estrogenic, estrogenic substances, determination, Kober reaction use, *Bachman*,

1939, 131, 455

Excretion, adrenocortical carcinoma, *Hirschmann*,

1943, 150, 363

Hormones, metabolism, *Fish and Dorfman*,

1941, 140, 83

1942, 143, 15

Fish, Dorfman, and Young,

1942, 143, 715

3-Hydroxy- Δ^5 , determination, polarographic, *Hershberg, Wolfe, and Fieser*,

1941, 140, 215

Keto-, carbonyl groups, determination, gravimetric, *Hughes*,

1941, 140, 21

17-Keto-, determination, colorimetric, *Holtorff and Koch*,

1940, 135, 377

—, neutral, urine, determination, colorimetric, correction equation, *Talbot, Berman, and MacLachlan*,

1942, 143, 211

—, urine, determination, colorimetric, *Holtorff and Koch*,

1940, 135, 377

—, —, extracts, chromatographic separation and determination, colorimetric, *Talbot, Wolfe, MacLachlan, and Berman*,

1941, 139, 521

Steroid(s)—continued:

α -17-Keto- and β -17-keto-, neutral, urine, hydrolysis, extraction, and determination, spectrochemical, *Talbot, Butler, MacLachlan, and Jones*,

1940, 136, 365

—, β -17-keto-, and total, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan*,

1940, 132, 595

Ketonic, determination, polarographic, *Wolfe, Hershberg, and Fieser*,

1940, 136, 653

Phenolic, color test, *Kleiner*,

1941, 138, 783

Urine, assay, *Marker and Hartman*,

1940, 133, 529

—, extraction apparatus, *Hershberg and Wolfe*,

1940, 133, 667

1941, 141, 215

—, ovariectomy effect, *Hirschmann*,

1940, 136, 483

Steroid compound(s): Urine excretion, males, *Engel, Thorn, and Lewis*,

1941, 137, 205

Sterol(s): Autoxidation, colloidal aqueous solution, *Bergström and Wintersteiner*,

1941, 141, 597

1942, 143, 503

1942, 145, 309, 327

—, esterification and constitutional factors, effect, colloidal aqueous solution, *Bergström and Wintersteiner*,

1942, 145, 327

Chemical activation, *Eck and Thomas*,

1939, 128, 257, 267

— — and configuration, relation, *Eck and Thomas*,

1939, 128, 257

Color reactions, chemical activation, *Eck and Thomas*,

1939, 128, 267

Determination, antimony trichloride reagent, *Zimmerli, Nield, and Russell*,

1943, 148, 245

Metabolism, *Treadwell and Eckstein*,

1941, 140, 35

Stilbestrol: Diethyl-, blood plasma phospholipids, effect, *Flock and Bollman*,

1942, 144, 571

Stilbestrol monoglycuronide: Urine, isolation, *Mazur and Shorr*,

1942, 144, 283

- Stomach:** *See also* Alimentary tract,
Gastric juice
- Stratum corneum:** Human, methionine,
Wilkerson and Tulane,
1939, 129, 477
- Streptococcus:** Carbohydrate metabo-
lism, *Friedemann*, 1939, 130, 757
Hemolytic, *Stock*, 1942, 142, 777
Krejci, Stock, Sanigar, and Kraemer,
1942, 142, 785
—, growth, biotin relation, *Hotile*,
Lampen, and Pappenheimer,
1941, 137, 457
—, Lancefield Group A-specific poly-
saccharide, purification and proper-
ties, *Zittle and Harris*,
1942, 142, 823
Nucleoprotein, conjugation, *Sevag and*
Smolens, 1941, 140, 833
- Streptococcus bovis:** Polysaccharide syn-
thesis, *Niven, Smiley, and Sherman*,
1941, 140, 105
- Streptococcus faecalis:** Glucose fermenta-
tion by, phosphorus transforma-
tion, *O' Kane and Umbreit*,
1942, 142, 25
- Streptococcus pyogenes:** Nucleic acid,
Sevag, Smolens, and Lackman,
1940, 134, 523
Pigmented heavy particles, *Sevag*,
Smolens, and Stiern, 1941, 139, 925
- Streptococcus salivarius:** Polysaccharide
synthesis, *Niven, Smiley, and Sher-*
man, 1941, 140, 105
- Strontium:** Biochemistry, *Fay, Andersch*,
and Behrmann, 1942, 144, 383
Radioactive, vitamin D determination,
use in, *Weissberger and Harris*,
1942, 144, 287
- Strontium chloride:** Activity determina-
tion, electrolytic, amino acid solu-
tions, *Joseph*, 1939, 130, 203
- Styracitol:** Fate, *Carr and Forman*,
1939, 128, 425
- Substrate(s):** Co-, proteolysis, *Behrens*
and Bergmann, 1939, 129, 587
- Succinic acid:** Bacterium-synthesized,
carbon dioxide carbon position,
Wood, Werkman, Hemingway, and
Nier, 1941, 139, 377
- Succinic dehydrogenase:** -Cytochrome
system, aluminum, chromium, and
rare earths, effect, *Horecker, Stotz*,
and Hogness, 1939, 128, 251
Marine organisms, *Ball and Meyerhof*,
1940, 134, 483
Phenothiazone, inhibition, *Collier and*
Allen, 1941, 140, 675
Tissue, determination, *Schneider and*
Potter, 1943, 149, 217
- Succinoxidase:** System, *Potter*,
1941, 141, 775
—, calcium salts, effect, mechanism,
Swingle, Axelrod, and Elvehjem,
1942, 145, 581
—, dilution effect, *Potter and Schneider*,
1942, 142, 543
—, liver, riboflavin deficiency, *Axelrod*,
Swingle, and Elvehjem,
1942, 145, 297
—, riboflavin deficiency, *Axelrod*,
Potter, and Elvehjem, 1942, 142, 85
Tissue, calcium effect, *Axelrod*,
Swingle, and Elvehjem,
1941, 140, 931
- Succinylsulfathiazole:** Folic acid and
biotin with, growth effect, *Nielsen*
and Elvehjem, 1942, 145, 713
Xanthopterin and, leucopenia and
body weight, effect, *Totter and Day*,
1943, 147, 257
- Sucrose:** Dextran synthesis and chemical
constitution, *Betacoccus arabino-*
saceus, *Hassid and Barker*,
1940, 134, 163
Inversion, pressure effect, *Sander*,
1943, 148, 311
Phosphorolysis and synthesis, bac-
terial, *Doudoroff, Kaplan, and Has-*
sid, 1943, 148, 67
- Sugar(s):** Alcohols, *Carr and Forman*,
1939, 128, 425
Ellis and Krantz, 1941, 141, 147
—, determination, micro-, *Todd, Vree-*
land, Myers, and West,
1939, 127, 269
- Blood.** *See* Blood sugar
- Bromoacetyl:** silver salts, organic
acids, action, *Tipson*,
1939, 130, 55

Sugar(s)—continued:

- Cysteine and, combination, *Schubert*, 1939, 130, 601
- Fermentation, colon and *aerogenes* bacteria, *Field and Poe*, 1940, 132, 473
- Metabolism, *Clarke, Solkot, and Corley*, 1939, 131, 135
- Oxidation, brain, *Bernheim and Bernheim*, 1941, 140, 441
- Sulfaguanidine:** Growth and blood plasma prothrombin, effect, *Black, Overman, Elvehjem, and Link*, 1942, 145, 137
- Leucopenia and granulopenia, effect, *Azelrod, Gross, Bosse, and Swingle*, 1943, 148, 721
- Sulfanilamide:** Acid-base equilibrium, carbonic anhydrase effect, *Free, Davies, and Myers*, 1943, 147, 167
- p*-Aminobenzoic acid oxidation, effect, *Lipmann*, 1941, 139, 977
- Blood, effect, *Webb and Kniazuk*, 1939, 128, 511
- Wendel, Wendel, and Cox*, 1939, 131, 177
- Conjugation inhibition, *Martin, Rennebaum, and Thompson*, 1941, 139, 871
- Determination, coupling component, *Bratton and Marshall*, 1939, 128, 537
- Phenylaminobutyric acid acetylation *in vivo*, relation, *Fishman and Cohn*, 1943, 148, 619
- Thyroxine and diiodotyrosine conversion from iodine, inorganic, *in vitro*, thyroid, effect, *Franklin and Chaikoff*, 1943, 148, 719
- Sulfanilyl-2-aminopyridine:** Urine excretion products, *Ratish, Bullowa, Ames, and Scudi*, 1939, 128, 279
- Sulfate:** Determination, manometric, micro-, *Hoagland*, 1940, 136, 543
- Sulfhemoglobin:** *Michel*, 1938, 126, 323
- Determination, micro-, *Evelyn and Malloy*, 1938, 126, 655
- Prosthetic group, *Haurowitz*, 1941, 137, 771

- Sulfhydryl:** Autolysis effect, *Bailey, Belfer, Eder, and Bradley*, 1942, 143, 721
- Sulfhydryl compound(s):** Bone phosphatase, *in vitro*, influence, *Williams and Watson*, 1940, 135, 337
- Dehydroascorbic acid complexes, *Drake, Smythe, and King*, 1942, 143, 89
- Sulfhydryl group(s):** Blood serum albumin, blood serum, and milk, *Greenstein*, 1940, 136, 795
- Edestin, excelsin, and globin solutions, *Greenstein*, 1939, 128, 233
- Egg albumin, *Anson*, 1940, 135, 797
- Myosin, determination, porphyrindin titration, *Greenstein and Edsall*, 1940, 133, 397
- Oxidation, 4-amino-2-methylnaphthol effect, *Bernheim and Bernheim*, 1940, 134, 457
- , tissues, titanium effect, *Bernheim and Bernheim*, 1939, 127, 695
- Protein, urease reversible inactivation, relation, *Hellerman, Chinnard, and Deitz*, 1943, 147, 443
- Proteins, *Greenstein*, 1939, 128, 233
- 1939, 130, 519
- Sulfonamide(s):** Adenine effect, *Martin and Fisher*, 1942, 144, 289
- p*-Hydroxylaminobenzene-, catalase inhibition, effect, *Sevag, Shelburne, and Ibsen*, 1942, 144, 711
- Purine effect, *Harris and Kohn*, 1941, 141, 989
- Sulfone:** Dimethyl, adrenals, *Pfaffner and North*, 1940, 134, 781
- Sulfonic acid(s):** Aromatic, amino acid reagents, *Doherty, Stein, and Bergmann*, 1940, 135, 487
- Stein, Moore, Stamm, Chou, and Bergmann*, 1942, 143, 121
- 3,4-Dichlorobenzene-, histidine preparation, use, *Vickery*, 1942, 143, 77
- Naphthalene- β -, amino acid reagent, *Bergmann and Stein*, 1939, 129, 609
- Sulfonium reaction(s):** Methionine, metabolic significance, *Toennies*, 1940, 132, 455

Sulfur: Amino acid, pituitary lactogenic hormone, *Li*, 1943, 148, 289
 Blood plasma ultrafiltrates, l-cystine and dl-methionine administration effect, *Brown and Lewis*, 1941, 138, 717
 — — —, distribution, *Brown and Lewis*, 1941, 138, 705
 -Containing amino acid complex, *Astragalus pectinatus*, isolation, *Horn and Jones*, 1941, 139, 649
 — — —, wool, isolation, *Horn, Jones, and Ringel*, 1941, 138, 141
 — — —, synthesis, *du Vigneaud and Brown*, 1941, 138, 151
 — — acids, lipotropic action, *Singal and Eckstein*, 1941, 140, 27
 — compounds, growth, utilization, *Rose and Rice*, 1939, 130, 305
 Cysteine, sulfide sulfur, radioactive, conversion, enzymatic, *Smythe and Halliday*, 1942, 144, 237
 Metabolism, *Jen and Lewis*, 1939, 127, 97
 Brown and Lewis, 1941, 138, 705, 717
 Blood and Lewis, 1941, 139, 407, 413
 —, iodoacetic acid influence, *Stevenson and White*, 1940, 134, 709
 Methionine, taurine sulfur conversion, *Tarver and Schmidt*, 1942, 146, 69
 -Polysulfide mixture, colloidal, absorption and oxidation, *Greengard and Woolley*, 1940, 132, 83
 Proteins, *Lindstrom and Sandstrom*, 1941, 138, 445
 Radioactive, body protein radioactive sulfur distribution, ingestion effect, *Tarver and Schmidt*, 1942, 146, 69
 —, methionine conversion to cystine, indicator, *Tarver and Schmidt*, 1939, 130, 67
 Spermatozoa, *Zittle and O'Dell*, 1941, 140, 899
 Sulfide, radioactive, cysteine sulfur conversion, enzymatic, *Smythe and Halliday*, 1942, 144, 237
 Taurine, methionine sulfur, conversion, *Tarver and Schmidt*, 1942, 146, 69

Sulfur—continued:

Tobacco mosaic virus protein, distribution, *Ross*, 1940, 136, 119
 — — —, rib-grass strain, *Knight*, 1943, 147, 663
 Total, blood globins, species differences, *Beach, Bernstein, Hummel, Williams, and Macy*, 1939, 130, 115
 Suprarenal: See Adrenal
 Sweat: See Perspiration
 Synovial fluid: Mucin, bacterial enzyme hydrolyzing, *Robertson, Ropes, and Bauer*, 1940, 133, 261
 Mucopolysaccharide isolation, *Meyer, Smyth, and Dawson*, 1939, 128, 319
 Syphilis: Diagnosis, blood serum, tissue extract antigenic substance, chemical constitution, *Brown and Kolmer*, 1941, 137, 525

T

Taka-diastase: Buffer influence, *Ballou and Luck*, 1940, 135, 111
Tapeworm: See also *Cysticercus fasciolaris*
Taurine: N-(α , γ -Dihydroxy- β , β -dimethylbutyryl)-, growth inhibition, pantothenic acid effect, *Snell*, 1941, 141, 121
 Sulfur, methionine sulfur, conversion, *Tarver and Schmidt*, 1942, 146, 69
Taurocholic acid: Production, *Virtue and Doster-Virtue*, 1938, 126, 141
 1939, 127, 431
 1939, 128, 665
 1941, 137, 227
 —, cystamine effect, *Virtue and Doster-Virtue*, 1938, 126, 141
 —, cysteine, homocysteine, and thio-glycolic acid effect, *Virtue and Doster-Virtue*, 1939, 128, 665
 —, cystine disulfide, cysteine sulfenic acid, and cysteine acid effect, *Virtue and Doster-Virtue*, 1939, 127, 431
 —, methionine sulfoxide effect, *Virtue and Doster-Virtue*, 1941, 137, 227
Temperature: Environmental, blood sugar, liver glycogen, and absorption, glucose and starch administra-

Temperature—continued:

- tion, effect, *Rafferty and MacLachlan*, 1941, 140, 167
- Tendon:** Electrolyte and water exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 389
- Testis:** Phospholipids, elaidic acid absence, *Sinclair*, 1940, 134, 89
- Testosterone:** Androsterone, conversion, *Dorfman, Cook, and Hamilton*, 1939, 130, 285
- relation, *Dorfman and Hamilton*, 1940, 133, 753
- Blood serum lipids, effect, *Looney and Romanoff*, 1940, 136, 479
- — —, schizophrenia, effect, *Randall*, 1940, 133, 137
- Color reaction, *Koenig, Melzer, Szego, and Samuels*, 1941, 141, 487
- m*-Dinitrobenzene reaction compounds, absorption spectra, *Langstroth and Talbot*, 1939, 128, 759
- Etioallocholanol-3(β)-17-one, conversion, *Dorfman and Fish*, 1940, 135, 349
- Testosterone propionate:** Creatinuria, effect, *Coffman and Koch*, 1940, 135, 519
- Liver, kidney, and intestine arginase, effect, *Kochakian and Clark*, 1942, 143, 795
- Tetraacetyl l-rhamnose:** New form, *Tipson*, 1939, 130, 55
- Tetrahydrothiophene: 3,4-Diamino-**, synthesis and stability, *Kilmer, Armstrong, Brown, and du Vigneaud*, 1942, 145, 495
- Tetramethyl l-rhamnitol: 1,3,4,5-**, synthesis, *Tipson and Levene*, 1939, 130, 235
- Theelin:** Dihydro-, urine, pregnancy, isolation, *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 1939, 130, 431
- α -Dihydro-, placenta, isolation, *Huffman, Thayer, and Doisy*, 1940, 133, 567
- , urine, pregnancy, isolation, *Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 1940, 134, 591

Theelin—continued:

- Placenta, isolation, *Westerfeld, MacCorquodale, Thayer, and Doisy*, 1938, 126, 195
- Thiamine:** Absorption spectra, *Melnick*, 1939, 131, 615
- p*-Aminoacetophenone, diazotized, reaction, *Melnick and Field*, 1939, 127, 505
- Biological materials, determination, *p*-aminoacetophenone, *Melnick and Field*, 1939, 127, 515
- Body fat synthesis, effect, *McHenry and Gavin*, 1939, 128, 45
- Buffer salts, effect, *Beadle, Greenwood, and Kraybill*, 1943, 149, 339
- Carbohydrate metabolism, effect, *Harper*, 1942, 142, 239
- Chemical reagent for, *Prebluda and McCollum*, 1939, 127, 495
- Citric acid excretion, effect, *Smith and Meyer*, 1941, 139, 227
- — metabolism, relation, *Sober, Lipton, and Elvehjem*, 1940, 134, 605
- Coccarboxylase, effect, *Lipton and Elvehjem*, 1940, 136, 637
- Combined, milk, *Halliday and Deuel*, 1941, 140, 555
- Deficiency, blood lactate-pyruvate relation, effect, *Stotz and Bessey*, 1942, 143, 625
- , — pyruvate, glucose ingestion effect, *Bueding, Stein, and Wortis*, 1941, 140, 697
- disease, pyridine analogue, effect, *Woolley and White*, 1943, 149, 285
- Destruction, fish effect, *Woolley*, 1941, 141, 997
- Determination, chemical, *Emmett, Peacock, and Brown*, 1940, 135, 131
- Kirch and Bergeim*, 1942, 143, 575
- , microbiological, *Niven and Smiley*, 1943, 150, 1
- , ultramicro-, fermentation method, *Atkin, Schultz, and Frey*, 1939, 129, 471
- Digestive secretions, fate, *Melnick, Robinson, and Field*, 1941, 138, 49

Thiamine—continued:

- Diphospho-, reduction rate, *Barron and Lyman*, 1941, 141, 951
- Fat synthesis, effect, *Quackenbush, Steenbock, and Platz*, 1942, 145, 163
- Fatty acid synthesis, effect, *Longenecker, Gavin, and McHenry*, 1940, 134, 693
- Free, milk, *Halliday and Deuel*, 1941, 140, 555
- Heat effect, *Beadle, Greenwood, and Kraybill*, 1943, 149, 339
- Greenwood, Beadle, and Kraybill*, 1943, 149, 349
- Hydrogen ion concentration, effect, *Beadle, Greenwood, and Kraybill*, 1943, 149, 339
- α -Ketoglutarate metabolism, effect, *Barron, Goldinger, Lipton, and Lyman*, 1941, 141, 975
- Meat, curing effect, *Greenwood, Beadle, and Kraybill*, 1943, 149, 349
- Metabolic products, urine, determination, *Schultz, Atkin, and Frey*, 1940, 136, 713
- Perspiration, *Tennent and Silber*, 1943, 148, 359
- Pyruvate condensation reactions, effect, *Barron, Lyman, Lipton, and Goldinger*, 1941, 141, 957
- Reduction products, absorption spectra, *Melnick*, 1939, 131, 615
- rate, *Barron and Lyman*, 1941, 141, 951
- Riboflavin and, metabolism relation, *Sure and Ford*, 1942, 146, 241
- Tissue metabolism, effect, *Muus, Weiss, and Hastings*, 1939, 129, 303
- Urine bisulfite-binding substances, effect, *Shils, Day, and McCollum*, 1941, 139, 145
- , determination, *Schultz, Atkin, and Frey*, 1940, 136, 713
- Egaña and Meiklejohn*, 1941, 141, 859
- , —, chemical, *Melnick and Field*, 1939, 130, 97
- , —, Prebluda-McCollum reaction, *Alexander and Levi*, 1942, 146, 399

Thiamine—continued:

- Urine, determination, thiochrome method, *Mason and Williams*, 1942, 146, 589
- , —, —, nicotinic acid ingestion effect, *Mason and Williams*, 1941, 140, 417
- , form, *Melnick and Field*, 1939, 130, 97
- pyruvate, effect, *Harper and Deuel*, 1941, 137, 233
- pyruvic acid, effect, *Shils, Day, and McCollum*, 1941, 139, 145
- , stability, *Melnick and Field*, 1939, 130, 97
- See also Vitamin B₁
- Thiamine pyrophosphate: See Cocarboxylase
- Thiazole: Vitamin B₁, photochemistry, *Uber and Verbrugge*, 1940, 136, 81
- Thiazoline: 2-Methyl-, properties, proteins, relation, *Linderström-Lang and Jacobsen*, 1941, 137, 443
- Thiocyanate: Biological fluids, determination, *Chesley*, 1941, 140, 135
- Blood plasma, dehydration effect, *Mellors, Muntwyler, Mautz, and Abbott*, 1942, 144, 785
- serum, determination, thiocyanate salts, administration effect, *Ginsburg and Benotti*, 1939, 131, 503
- Lipoid-, blood serum, *Rosenbaum and Laviates*, 1939, 131, 663
- Thiocyanogen: Absorption, triolein and trilinolein, *Wheeler, Riemenschneider, and Sando*, 1940, 132, 687
- Thioglycolic acid: Taurocholic acid production, effect, *Virtue and Doster-Virtue*, 1939, 128, 665
- Thiol(s): Lactogenic hormone reducing groups, effect, *Fraenkel-Conrat*, 1942, 142, 119
- Thiol compound(s): Lactogenic hormone, effect, *Fraenkel-Conrat, Simpson, and Evans*, 1942, 142, 107
- Thiophenevaleric acid: Biotin relation, *Melville, Moyer, Hofmann, and du Vigneaud*, 1942, 146, 487
- Thiourea: Metabolism, *Blood and Lewis*, 1941, 139, 413

- Threo- α -amino- β , γ -dihydroxy-*n*-butyric acid:** *D*-, synthesis, *Niemann and Nichols*, 1942, 143, 191
- Threonine:** Allo-, threonine, conversion, *Carter, Handler, and Melville*, 1939, 129, 359
- dl*-Allo-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville*, 1940, 133, 109
- Allothreonine conversion, *Carter, Handler, and Melville*, 1939, 129, 359
- Determination, micro-, *Block and Bolling*, 1939, 130, 365
- , microdiffusion, periodate use, *Winnick*, 1942, 142, 461
- , periodate use, *Shinn and Nicolet*, 1941, 138, 91
- dl*-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville*, 1940, 133, 109
- Isoelectric points, *Vestling and Warner*, 1942, 144, 687
- Peanut proteins, *Brown*, 1942, 142, 299
- Peptide combination, lability to alkali, *Nicolet and Shinn*, 1941, 140, 685
- Proteins, alkali effect, *Nicolet, Shinn, and Saidel*, 1942, 142, 609
- Related compounds, isoelectric points, *Vestling and Warner*, 1942, 144, 687
- Zein hydrolysates, autoclaving effect, *Borchers, Totter, and Berg*, 1942, 142, 697
- Thrombin:** Action, fibrinogen coagulation, relation, *Chargaff and Ziff*, 1941, 138, 787
- Preparation, *Astrup and Darling*, 1940, 133, 761
- Pro-. See Prothrombin
- Prothrombin conversion, radioactive phosphorus as indicator, *Chargaff, Ziff, and Cohen*, 1940, 135, 351
- Purification, *Seegers, Brinkhous, Smith, and Warner*, 1938, 126, 91
- Seegers*, 1940, 136, 103
- Seegers and McGinty*, 1942, 146, 511
- Thrombin—continued:**
- Purified, properties, *Seegers*, 1940, 136, 103
- See also Hypoprothrombinemia
- Thromboplastic factor:** Heparin and reaction, *Chargaff, Ziff, and Cohen*, 1940, 136, 257
- Thromboplastic protein:** Lung, blood coagulation, action, *Cohen and Chargaff*, 1940, 136, 243
- , electrophoresis, *Cohen and Chargaff*, 1941, 140, 689
- , phosphatides, blood coagulation, action, *Cohen and Chargaff*, 1941, 139, 741
- Thymus:** Nucleate-protein mixtures, colloid osmotic pressure, *Greenstein*, 1943, 150, 107
- Thyroglobulin:** Denaturation, papain, crystalline, effect, *Lundgren*, 1941, 138, 293
- Thyroid:** Activity, proteins, iodinated, effect, *Reineke, Williamson, and Turner*, 1943, 147, 115
- Amino acid oxidation, kidney and liver, feeding effect, *Klein*, 1939, 128, 659
- Blood serum albumin, iodinated, effect, *Muus, Coons, and Salter*, 1941, 139, 135
- Diiodotyrosine conversion from iodine, inorganic, *in vitro*, sulfanilamide effect, *Franklin and Chaikoff*, 1943, 148, 719
- formation *in vitro*, *Morton and Chaikoff*, 1942, 144, 565
- — —, radioactive iodine as indicator, *Morton and Chaikoff*, 1943, 147, 1
- — rate, radioactive iodine as indicator, *Perlman, Morton, and Chaikoff*, 1941, 139, 449
- turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Perlman, and Chaikoff*, 1941, 140, 603
- Iodinated casein effect, *Reineke, Williamson, and Turner*, 1942, 143, 285

Thyroid—continued:

- Iodine metabolism, *Mann, Leblond, and Warren*, 1942, 142, 905
- turnover, radioactive iodine as indicator, *Pelzman, Chaikoff, and Morton*, 1941, 139, 433
- Liver *d*-amino acid oxidase, feeding effect, *Klein*, 1939, 131, 139
- Thyroxine conversion from iodine, inorganic, *in vitro*, sulfanilamide effect, *Franklin and Chaikoff*, 1943, 148, 719
- formation *in vitro*, *Morton and Chaikoff*, 1942, 144, 565
- — — —, radioactive iodine as indicator, *Morton and Chaikoff*, 1943, 147, 1
- — rate, radioactive iodine as indicator, *Pelzman, Morton, and Chaikoff*, 1941, 139, 449
- turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Pelzman, and Chaikoff*, 1941, 140, 603

See also Hyperthyroidism

Thyroidectomy: Amino acid oxidation, kidney, and liver, effect, *Klein*, 1939, 128, 659

Thyroxine and diiodotyrosine formation, radioactive iodine as indicator, *Morton, Chaikoff, Reinhardt, and Anderson*, 1943, 147, 757

Thyroparathyroidectomy: Calciferol effect, *Tweedy, Templeton, Patras, McKunkin, and McNamara*, 1939, 128, 407

Thyrotropic hormone: Pituitary, anterior, purification, *Fraenkel-Conrat, Fraenkel-Conrat, Simpson, and Evans*, 1940, 135, 199

Thyroid and blood plasma thyroxine and diiodotyrosine turnover, effect, radioactive iodine as indicator, *Morton, Pelzman, and Chaikoff*, 1941, 140, 603

Thyroxine: Blood plasma, turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Pelzman, and Chaikoff*, 1941, 140, 603

Thyroxine—continued:

- Crystalline, casein, iodinated, recovery, *Reineke and Turner*, 1943, 149, 555
- Determination, photometric, *Brand and Kassell*, 1939, 131, 489
- Diiodotyrosine conversion, *Block*, 1940, 135, 51
- Formation, thyroidectomy effect, radioactive iodine as indicator, *Morton, Chaikoff, Reinhardt, and Anderson*, 1943, 147, 757
- Iodine, inorganic, conversion *in vitro*, thyroid, sulfanilamide effect, *Franklin and Chaikoff*, 1943, 148, 719
- L*-, casein, iodinated, recovery, *Reineke and Turner*, 1943, 149, 563
- Spermatozoal metabolism, effect, *Lardy and Phillips*, 1943, 149, 177
- Thyroid, formation *in vitro*, *Morton and Chaikoff*, 1942, 144, 565
- , — — —, radioactive iodine as indicator, *Morton and Chaikoff*, 1943, 147, 1
- , — rate, radioactive iodine as indicator, *Pelzman, Morton, and Chaikoff*, 1941, 139, 449
- , turnover, thyrotropic hormone effect, radioactive iodine as indicator, *Morton, Pelzman, and Chaikoff*, 1941, 140, 603
- Tissue(s):** Calcified, mineral metabolism, blood phosphorus turnover, relation, radioactive phosphorus as indicator, *Manly, Hodge, and Manly*, 1940, 134, 293
- Electrolyte equilibrium, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
- Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367, 389
- Electrolytes, distribution, *Manery and Hastings*, 1939, 127, 657
- Extracts, cell-free, glucose phosphorylation and oxidation, *Colowick, Kalekar, and Cori*, 1941, 137, 343
- Fatty acids, carbon tetrachloride administration, effect, *Winter*, 1939, 128, 283
- Gas determination, *Scholander*, 1942, 142, 427

Tissue(s)—continued:

- Invertebrate, autolysis, *Belfer, Koran, Eder, and Bradley*, 1943, 147, 345
- Ketone bodies, *Harrison and Long*, 1940, 133, 209
- Lipids, insulin hypoglycemia effect, *Randall*, 1940, 133, 129
- , metabolism, *Sperry, Waelsch, and Stoyanoff*, 1940, 135, 281
- , synthesis and deposition, deuterium as indicator, *Waelsch, Sperry, and Stoyanoff*, 1940, 135, 291
- , Virginia white-tailed deer, composition, *Treadwell and Eckstein*, 1939, 128, 373
- Liquefier, apparatus, *Shelesnyak and Biskind*, 1942, 143, 663
- Metabolism, hemorrhage shock, effect, *Beecher and Craig*, 1943, 148, 383
- , riboflavin and vitamin B heat-stable components, effect, *Hastings, Muus, and Bessey*, 1939, 129, 295
- , thiamine effect, *Muus, Weiss, and Hastings*, 1939, 129, 303
- , vitamin deficiencies, *Hastings, Muus, and Bessey*, 1939, 129, 295
- , *Muus, Weiss, and Hastings*, 1939, 129, 303
- Nucleus, basic dye combination, *Kelley*, 1939, 127, 73
- , nucleoproteins and, dye reaction, comparison, *Kelley*, 1939, 127, 55
- Phosphatides, nitrogenous constituents, *Chargaff, Ziff, and Rittenberg*, 1942, 144, 343
- Phospholipids, determination, micro-, *Erickson, Avrin, Teague, and Williams*, 1940, 135, 671
- , diet relation, *Artom and Fishman*, 1943, 148, 405, 415, 423
- , ether-insoluble, *Sinclair and Dolan*, 1942, 142, 659
- , oxidation, vanadium action, *Bernheim and Bernheim*, 1939, 127, 353
- Protein metabolism, pregnancy and lactation, *Poo, Lew, and Addis*, 1939, 128, 69
- Pyridine nucleotides, inactivation *in vitro*, effect, *Handler and Klein*, 1942, 144, 453

Tissue(s)—continued:

- Pyruvic acid metabolism, effect, *Barron and Lyman*, 1939, 127, 143
- Respiration, malonate effect, *Baumann and Stare*, 1940, 133, 183
- Soft, ashing, *Buell*, 1939, 130, 357
- Transamination, *Cohen and Hekhuis*, 1941, 140, 711
- Tumor, cells, basic dye combination, *Kelley*, 1939, 127, 73
- , ultraviolet irradiation effect, *Knudson, Sturges, and Bryan*, 1939, 128, 721
- Titanium: Sulfhydryl groups, oxidation, tissues, effect, *Bernheim and Bernheim*, 1939, 127, 695
- Tobacco: Mosaic, protein, *Martin, Balls, and McKinney*, 1939, 130, 687
- virus, acetyl derivatives, *Miller and Stanley*, 1941, 141, 905
- , amino acids, aromatic, *Knight and Stanley*, 1941, 141, 39
- and antiserum, reaction, electron microscope study, *Anderson and Stanley*, 1941, 139, 339
- , carbobenzoxy, *p*-chlorobenzoxy, and benzenesulfonyl derivatives, *Miller and Stanley*, 1942, 146, 331
- , cleavage products, *Knight and Lauffer*, 1942, 144, 411
- , denaturation, *Lauffer and Dow*, 1941, 140, 509
- , —, measurement by phenolic groups, *Miller*, 1942, 146, 339
- , derivatives, *Miller and Stanley*, 1941, 141, 905
- , —, 1942, 146, 331
- , —, 1942, 146, 339, 345
- , —, phenolic groups, determination, tyrosine derivatives, relation, *Miller*, 1942, 146, 345
- , heat denaturation, *Lauffer and Price*, 1940, 133, 1
- , intestine nucleophosphatase action, *Cohen and Stanley*, 1942, 142, 863
- , — nucleic acid molecule, size and shape, *Cohen and Stanley*, 1942, 144, 539
- , —, —, properties and hydrolytic products, *Loring*, 1939, 130, 251

Tobacco—continued:

- Mosaic virus, phenylureido derivatives, *Miller and Stanley*,
1941, 141, 905
- —, physical and chemical properties, *Knight*, 1942, 145, 11
- — protein, amino acids, determination, *Ross*, 1941, 138, 741
- — —, — acids, fractionation, *Ross*,
1942, 143, 685
- — —, solution, diffusion, *Neurath and Saum*, 1938, 126, 435
- — —, —, viscosity, *Lauffer*,
1938, 126, 443
- — —, sulfur distribution, *Ross*,
1940, 136, 119
- — —, viscosimetry, *Frampton*,
1939, 129, 233
- —, rib-grass strain, sulfur, *Knight*,
1943, 147, 663
- Plant, ammonia nitrogen assimilation, nitrogen isotope in study, *Vickery, Pucher, Schoenheimer, and Rittenberg*,
1940, 135, 531
- Ring spot virus, isolation and properties, *Stanley*, 1939, 129, 405
- — —, recovered plants, isolation, *Stanley*, 1939, 129, 429
- Tocopherol(s):** α -, muscle oxidation, *in vitro*, effect, *Houchin*,
1942, 146, 313
- , — oxygen consumption, creatine, and chloride, vitamin E deficiency, effect, *Houchin and Mattill*,
1942, 146, 301
- , phosphate derivative, muscle oxidation *in vitro*, effect, *Houchin*,
1942, 146, 313
- , —, muscle dystrophy, effect, *Houchin and Mattill*,
1942, 146, 309
- , related compounds, vitamin E activity, *Tishler and Evans*,
1941, 139, 241
- Carotene stability, effect, *Quackenbush, Cox, and Steenbock*,
1942, 145, 169
- Determination, colorimetric oxidation-reduction, *Scudi and Buhs*,
1942, 146, 1

Tocopherol(s)—continued:

- dl*- α -, blood serum, determination, photoelectric, *Mayer and Sobotka*,
1942, 143, 695
- Feces, *Hines and Mattill*,
1943, 149, 549
- Liver, determination, chemical, *Hines and Mattill*, 1943, 149, 549
- Muscle, determination, chemical, *Devlin and Mattill*, 1942, 146, 123
- Hines and Mattill*, 1943, 149, 549
- Urine, *Hines and Mattill*,
1943, 149, 549
- See also Vitamin E
- Tocopherylquinone(s):** α -, muscle dystrophy, relation, *Golumbic and Mattill*, 1940, 135, 339
- Determination, colorimetric oxidation-reduction, *Scudi and Buhs*,
1942, 146, 1
- Tocoquinone:** α -, vitamin E, relation, *Emerson, Emerson, and Evans*,
1939, 131, 409
- Tomato:** Bushy stunt virus, diffusion constant, *Neurath and Cooper*,
1940, 135, 455
- — —, purification, *Stanley*,
1940, 135, 437
- Roots, aucuba mosaic virus, protein, isolation, *Stanley*, 1938, 126, 125
- Tooth:** Phosphorus, inorganic, metabolism, radioactive phosphorus as indicator, *Manly and Bale*,
1939, 129, 125
- Potassium, spectrochemistry, *Steadman, Hodge, and Horn*,
1941, 140, 71
- See also Dental plaque
- Toxin:** Erythrogenic, scarlet fever, isolation, electrophoretic, and properties, *Krejci, Stock, Sanigar, and Kraemer*, 1942, 142, 785
- Scarlet fever, chemistry, *Barron, Dick, and Lyman*, 1941, 137, 267
- —, isolation, *Stock*, 1942, 142, 777
- Transaminase:** Kinetics, *Cohen*,
1940, 136, 585
- Transamination, *Cohen*,
1940, 136, 565

- Transamination:** Oats, germinating, *Albaum and Cohen*, 1943, 149, 19
 Peptide synthesis, *Herbst and Shemin*, 1943, 147, 541
 Tissues, *Cohen and Hekhuis*, 1941, 140, 711
 Transaminase relation, *Cohen*, 1940, 136, 565
- Transmethylation:** Anserine, relation, *Schenck, Simmonds, Cohn, Stevens, and du Vigneaud*, 1943, 149, 355
 Choline and betaine, structural specificity relation, *Moyer and du Vigneaud*, 1942, 143, 373
 Metabolism rôle, *Simmonds and du Vigneaud*, 1942, 146, 685
- Transphosphorylation:** Myokinase rôle, *Colowick and Kalckar*, 1943, 148, 117
Kalckar, 1943, 148, 127
- Trichloroethylene:** Fate, organism, *Barrett and Johnston*, 1939, 127, 765
- Trigonelline:** Determination, photolumetric, *Fox, McNeil, and Field*, 1943, 147, 645
 Synthesis and excretion, *Sarett, Perlzweig, and Levy*, 1940, 135, 483
- Triiodobenzoate:** 2,3,5-, brain oxidation by, effect, *Bernheim and Bernheim*, 1941, 138, 501
- Trilinolein:** Preparation, properties, and thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando*, 1940, 132, 687
- Trimethyleneindole:** Derivatives, preparation, *Gould and Jacobs*, 1939, 130, 407
- Triolein:** Preparation, properties, and thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando*, 1940, 132, 687
- Triose phosphate:** Oxidation, malonate effect, *Potter*, 1940, 134, 417
- Triphosphopyridine:** Nucleotide, determination, micro-, *Haas, Harrer, and Hogness*, 1942, 142, 335
- Tropine:** Esterase, properties, *Glick*, 1940, 134, 617
- Trout:** Blood constituents, *Field, Elvehjem, and Juday*, 1943, 148, 261
- Trypanosoma lewisi:** Glucose metabolism, carbon dioxide rôle, *Searle and Reiner*, 1941, 141, 563
- Trypsin:** Casein digestion, cystine liberation, *Jones and Gersdorff*, 1939, 129, 207
- Chymo-.** See Chymotrypsin
- Crystalline, inactivation, photochemical,** *Uber and McLaren*, 1941, 141, 231
- Dehydrogenases, action,** *Bernheim*, 1940, 133, 141
- Kinetics, synthetic substrates,** *Hofmann and Bergmann*, 1941, 138, 243
- Pituitary follicle-stimulating hormone, preparation and properties, use,** *McShan and Meyer*, 1940, 135, 473
 — gonadotropic activity, effect, *McShan and Meyer*, 1938, 126, 361
- Plastein synthesis, insulin digests, effect,** *Haddock and Thomas*, 1942, 144, 691
- Specificity,** *Bergmann, Fruton, and Pollak*, 1939, 127, 643
Hofmann and Bergmann, 1939, 130, 81
- Ultraviolet radiation effect,** *Verbrugge*, 1943, 149, 405
- Tryptophane:** Deficiency, blood, effect, *Albanese, Holt, Kajdi, and Frankston*, 1943, 148, 299
 Determination, colorimetric, micro, *Eckert*, 1943, 148, 205
 —, methods, comparison, *Shaw and McFarlane*, 1940, 132, 387
 —, photometric, *Brand and Kassell*, 1939, 131, 489
l(+)- and *dl-amino-N-monomethyl-*, growth availability, *Gordon*, 1939; 129, 309
l(-)-, growth availability, *Gordon*, 1939, 129, 309
- Liver glycogen, effect,** *Borchers, Berg, and Whitman*, 1942, 145, 657
- Metabolism, pyridoxine deficiency, xanthurenic acid effect,** *Lepkovsky, Roboz, and Haagen-Smit*, 1943, 149, 195

Tryptophane—continued:

- N-Methyl-, acetyl, growth effect,
Gordon, Cahill, and Jackson,
1939, 131, 189
- Phospho-12-tungstates, solubility and
composition, *Van Slyke, Hiller, and*
Dillon, 1942, 146, 137
- Pituitary lactogenic hormone, *Li,*
Lyons, and Evans, 1940, 136, 709
- Plant growth substance, conversion,
alkalinity effect, *Gordon and Wild-*
man, 1943, 147, 389
- Protein hydrolysates, color test, *Alba-*
nese and Frankston, 1942, 144, 563
- — containing, preparation, intra-
venous injection effect, *White and*
Elman, 1942, 143, 797
- Protein-free, casein conversion,
Toennies, 1942, 145, 667
- Urine kynurenic acid, kynurenine, and
acetone bodies, effect, *Borchers,*
Berg, and Whitman, 1942, 145, 657
- Utilization, growth, optical isom-
erism influence, *Totter and Berg,*
1939, 127, 375
- Tubercle bacillus:** Avian, lipids, bound,
Anderson, Creighton, and Peck,
1940, 133, 675
- , polysaccharides, *Karjala and*
Heidelberger, 1941, 137, 189
- , wax, mycolic acids, *Anderson and*
Creighton, 1939, 129, 57
- Bovine, polysaccharides, *Menzel and*
Heidelberger, 1939, 127, 221
- , wax, chemistry, *Cason and Ander-*
son, 1938, 126, 527
- Human, wax fractions, chemistry,
Wieghard and Anderson,
1938, 126, 515
- Lipids, chemistry, *Stodola, Lesuk,*
and Anderson, 1938, 126, 505
- Wieghard and Anderson,*
1938, 126, 515
- Cason and Anderson,*
1938, 126, 527
- Anderson and Creighton,*
1939, 129, 57
- Geiger and Anderson,*
1939, 131, 539

Tubercle bacillus—continued:

- Lipids, chemistry, *Anderson and*
Creighton, 1939, 131, 549
- Anderson, Creighton, and Peck,*
1940, 133, 675
- Anderson, Peck, and Creighton,*
1940, 136, 211
- Lesuk and Anderson,*
1940, 136, 603
- Peck and Anderson,* 1941, 138, 135
- 1941, 140, 89
- Mycolic acid, *Lesuk and Anderson,*
1940, 136, 603
- —, isolation and properties, *Stodola,*
Lesuk, and Anderson,
1938, 126, 505
- Phleimycolic acid, *Peck and Anderson,*
1941, 140, 89
- Tuberculin:** Carbohydrates, properties,
Steenken, 1941, 141, 91
- Cell residues, phosphatide fatty acids,
Peck and Anderson, 1941, 138, 135
- — — polysaccharide, *Anderson,*
Peck, and Creighton, 1940, 136, 211
- Polysaccharides and nucleic acid iso-
lation, electrophoretic, *Seibert and*
Watson, 1941, 140, 55
- Protein derivatives, purified, proper-
ties, *Steenken,* 1941, 141, 91
- , nucleic acid and polysaccharide
removal, *Seibert,* 1940, 133, 593
- Proteins, x-ray studies, *Spiegel-Adolf,*
Seibert, and Henny, 1941, 137, 503
- Tuberculosis:** Blood protein, electro-
phoresis study, *Seibert and Nelson,*
1942, 143, 29
- Tumor(s):** Arginase, *Greenstein, Jen-*
rette, Mider, and White,
1941, 137, 795
- Bearing rats, liver catalase activity,
tumor extirpation effect, *Greenstein,*
Jenrette, and White, 1941, 141, 327
- —, sphingomyelin occurrence and
turnover, *Hunter and Levy,*
1942, 146, 577
- Enzymes, proteolytic, specificity,
Fruton, Irving, and Bergmann,
1940, 132, 465
- Growth, blood plasma phosphatase,
effect, *Weil,* 1941, 138, 375

Tumor(s)—*continued*:

- Growth, blood plasma proteolysis,
Weil and Russell, 1938, 126, 245
- Liver cell, vitamin A relation, *Goerner and Goerner*, 1939, 128, 559
- Malignant, cathepsin separation,
Maver, 1939, 131, 127
- , glutamic acid, *Graff*, 1939, 130, 13
- Graff, Rittenberg, and Foster*, 1940, 133, 745
- , pleural fluid hyaluronic acid,
relation, *Meyer and Chaffee*, 1940, 133, 83
- , protein glutamic acid, *Woodward, Reinhart, and Dohan*, 1941, 138, 677
- Phospholipid turnover, radioactive
phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 1940, 133, 319
- Polysaccharide, *Kabat*, 1939, 130, 143
- Sphingomyelin metabolism, *Haven and Levy*, 1941, 141, 417
- Tissue cells, basic dye combination,
Kelley, 1939, 127, 73
- , malignant, glutamic acid, nature,
White and White, 1939, 130, 435
- , ultraviolet irradiation effect,
Knudson, Sturges, and Bryan, 1939, 128, 721
- See also Cancer*
- Tungsten**: Biological materials, deter-
mination, *Aull and Kinard*, 1940, 135, 119
- Tursiops truncatus**: *See Dolphin*
- Turtle**: Scutes, amino acids, *Block and Bolling*, 1939, 127, 685
- Tyrosidine**: *d*-Amino acids, *Lipmann, Hotchkiss, and Dubos*, 1941, 141, 163
- Bacteria, metabolism, effect, *Dubos, Hotchkiss, and Coburn*, 1942, 146, 421
- Chemical nature, *Hotchkiss*, 1941, 141, 171
- Composition, *Christensen, Edwards, and Piersma*, 1941, 141, 187

- Tyrosinase**: Activation, *Tenenbaum and Jensen*, 1943, 147, 27
- Mammalian, dopa oxidase, relation,
Hogeboom and Adams, 1942, 145, 273
- Phenolic pressor amines, relation,
Alles, Blohm, and Saunders, 1942, 144, 757
- Phenylthiocarbamide effect, *Bernheim and Bernheim*, 1942, 145, 213
- Preparation, *Tenenbaum and Jensen*, 1942, 145, 293
- Pro-, activators, grasshopper egg oil,
unimolecular films and fractions,
Allen, Boyd, and Bodine, 1942, 143, 785
- Purification, *Jensen and Tenenbaum*, 1943, 147, 737
- Tyrosine**: Alkaptonuria, effect, *Abbott and Salmon*, 1943, 150, 339
- Derivatives, tobacco mosaic virus
phenolic groups, determination, re-
lation, *Miller*, 1942, 146, 345
- Determination, photometric, *Brand and Kassell*, 1939, 131, 489
- Diiodo-. *See* Diiodotyrosine
- l*-, phenolic hydroxyl group activity,
factors affecting, *Bowman*, 1941, 141, 877
- Metabolism, *Schoenheimer, Ratner, and Rittenberg*, 1939, 127, 333
- , ascorbic acid rôle, *Sealock, Perkin-
son, and Basinski*, 1941, 140, 153
- Metabolites, excretion, dicarboxylic
acid administration effect, *Sealock*, 1942, 146, 503
- , —, vitamin C deficiency effect,
Sealock and Silberstein, 1940, 135, 251
- Phenylalanine conversion, biological,
Moss and Schoenheimer, 1940, 135, 415
- β -Phenyllactic acid conversion, *Moss*, 1941, 137, 739
- Pituitary lactogenic hormone, *Li, Lyons, and Evans*, 1940, 136, 709
- pressor and oxytocic hormones,
Potts and Gallagher, 1942, 143, 561
- Tyrosine**: Determination, *Dimick*, 1943, 149, 387

U

- Ultracentrifugation:** Computation, alignment chart, *Schachman*, 1942, 143, 395
- Ultrafiltration:** Apparatus, *Coolidge*, 1940, 135, 541
- Ultraviolet radiation:** Egg albumin denaturation and molecular splitting, effect, *Bernhart*, 1939, 128, 289
- Skin, blood, and tumor tissue, cholesterol, effect, *Knudson, Sturges, and Bryan*, 1939, 128, 721
- Undernutrition:** Blood lipids, effect, *Entenman, Changus, Gibbs, and Chaikoff*, 1940, 134, 59
- Urea:** Blood, chicken, determination, *Howell*, 1939, 128, 573
- , determination, *Howell*, 1939, 129, 641
- , —, colorimetric, *Ormsby*, 1942, 146, 595
- Creatine synthesis, relation, *Fisher and Wilhelmi*, 1940, 132, 135
- Formation, carbon source, *Rittenberg and Waelsch*, 1940, 136, 799
- Hydrolysis, kinetics, *Warner*, 1942, 142, 705
- Liver, formation, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp*, 1940, 132, 393
- , synthesis, *Gornall and Hunter*, 1943, 147, 593
- Nitrogen, blood, determination, *Gentzkow*, 1942, 143, 531
- , determination, micro-, *Bock*, 1941, 140, 519
- Organic phosphate determination, King method, effect, *Rae and Eastcott*, 1939, 129, 255
- Solution, methemoglobin-hemoglobin oxidation-reduction potentials, *Taylor*, 1942, 144, 7
- , oxygen-hemoglobin equilibrium, *Taylor and Hastings*, 1942, 144, 1
- Soy bean urease, hydrolysis, activation energy, *Sizer*, 1940, 132, 209
- Synthesis, liver, carbon dioxide rôle, *Evans and Slotin*, 1940, 136, 805
- Thio-, metabolism, *Blood and Lewis*, 1941, 139, 413

Urea—continued:

- Urine, determination, colorimetric, *Ormsby*, 1942, 146, 595
- Urease:** Crystalline, oxidation-reduction potential, relation, *Sizer and Tytell*, 1941, 138, 631
- Inactivation, reversible, protein sulfhydryl groups, relation, *Hellerman, Chinard, and Deitz*, 1943, 147, 443
- Jack bean, canavanine removal, *Archibald and Hamilton*, 1943, 150, 155
- Recrystallization, *Dounce*, 1941, 140, 307
- Reducing groups, *Hellerman, Chinard, and Deitz*, 1943, 147, 443
- Soy bean, urea hydrolysis, activation energy, *Sizer*, 1940, 132, 209
- Urechis:** Eggs, respiratory pigment, *Horowitz and Baumberger*, 1941, 141, 407
- Ureide:** Ninhydrin, synthesis and properties, *Van Slyke and Hamilton*, 1943, 150, 471
- Uric acid:** Blood, determination, uricase use, *Blauch and Koch*, 1939, 130, 443
- , diet effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
- , *in vitro*, uricase use, *Blauch and Koch*, 1939, 130, 455
- plasma, determination, *Bulger and Johns*, 1941, 140, 427
- Excretion, dietary carbohydrate and fat effect, *Adlersberg and Ellenberg*, 1939, 128, 379
- Uricase:** Activation, cysteine effect, *Scheer and Scheer*, 1943, 150, 359
- Blood uric acid determination, use, *Blauch and Koch*, 1939, 130, 443
- — —, *in vitro*, *Blauch and Koch*, 1939, 130, 455
- Liver, diet effect, *Wachtel, Hove, Elvehjem, and Hart*, 1941, 138, 361
- Urine:** Acetoacetic acid, effect, *Stark and Somogyi*, 1943, 147, 319
- —, glucose effect, *Stark and Somogyi*, 1943, 147, 721
- —, insulin effect, *Stark and Somogyi*, 1943, 147, 731

Urine—continued:

- Acetone bodies, determination, salicylaldehyde use, *Behre*, 1940, 136, 25
- Acetone body excretion, *DL*-lysine monohydrochloride effect, *Sharp and Berg*, 1941, 141, 739
- Amino acids, determination, ninhydrin-carbon dioxide method, *Van Slyke, MacFadyen, and Hamilton*, 1943, 150, 251
- Ammonia, excretion, amino acid injection effect, *Bliss*, 1941, 137, 217
- , glutamine as source, *Van Slyke, Phillips, Hamilton, Archibald, Fletcher, and Hiller*, 1943, 150, 481
- Androgenic substances, extraction apparatus, *Neterval*, 1940, 133, 313
- , ovariectomy effect, *Hirschmann*, 1939, 130, 421
- Androgens, characteristics, *Butz and Hall*, 1938, 126, 265
- Ascorbic acid determination, colorimetric, *Evelyn, Malloy, and Rosen*, 1938, 126, 645
- — —, 2,4-dinitrophenylhydrazine derivative of dehydroascorbic acid, use, *Roe and Kuether*, 1943, 147, 399
- Atabrine, determination, *Masen*, 1943, 148, 529
- Bisulfite-binding substance excretion, thiamine effect, *Shils, Day, and McCollum*, 1941, 139, 145
- Bromide determination, *Friedman*, 1942, 144, 519
- Cortin-like material, *Venning, Hoffman, and Browne*, 1943, 148, 455
- Creatine. *See also* Creatinuria
- Creatinine and creatine determination, colorimetric, *Peters*, 1942, 146, 179
- Cystine determination, *Brand, Cahill, and Kassell*, 1940, 133, 431
- , polarographic, *Reed*, 1942, 142, 61
- excretion, cystinuria, homocystine, homocysteine, and cystine and cysteine derivatives, effect, *Hess and Sullivan*, 1943, 149, 543

Urine—continued:

- Diodrast determination, colorimetric, *Floz, Pitesky, and Alving*, 1942, 142, 147
- Estrogenic substances, conjugated, hydrolysis, *Edson and Heard*, 1939, 130, 579
- Estrogens, estrone administration effect, *Longwell and McKee*, 1942, 142, 757
- Estrone determination, colorimetric, *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 1940, 134, 319
- Ethyl alcohol determination, colorimetric, *Gibson and Blotner*, 1938, 126, 551
- Glomerulus, sodium, *Necturus*, *Bott*, 1943, 147, 653
- Glucuronide, steroid, *Strickler, Shaffer, Wilson, and Strickler*, 1943, 148, 251
- Glycoeyamine excretion, *Borsook, Dubnoff, Lilly, and Marriott*, 1941, 138, 405
- Gonadotropic hormone, pregnancy, preparation, *Gurin, Bachman, and Wilson*, 1939, 128, 525
- Guanidine. *See also* Guanidinuria
- Hemoglobin and heme pigments, determination, *Flink and Watson*, 1942, 146, 171
- Histidine, determination, *Langley*, 1941, 137, 255
- , pregnancy, *Langley*, 1941, 137, 255
- β -Hydroxybutyric acid, effect, *Stark and Somogyi*, 1943, 147, 319
- , glucose effect, *Stark and Somogyi*, 1943, 147, 721
- , insulin effect, *Stark and Somogyi*, 1943, 147, 731
- to acetoacetic acid ratio, *Primates, Friedemann*, 1942, 142, 635
- Inulin determination, colorimetric, *Steinitz*, 1938, 126, 589
- , *Alwing, Rubin, and Miller*, 1939, 127, 609
- , photometric, micro, *Ranney and McCune*, 1943, 150, 311

Urine—continued:

- Iodides, determination, *Pearl*, 1943, 148, 85
- , —, colorimetric, *Flox, Pitesky, and Alving*, 1942, 142, 147
- Isoandrosterone, isolation, *Pearlman*, 1940, 136, 807
- Keto acids, determination, *Friedemann and Haugen*, 1943, 147, 415
- Ketones, phenolic, determination, colorimetric, *Talbot, Wolfe, MacLachlan, Karush, and Butler*, 1940, 134, 319
- , *See also* Ketonuria
- 17-Ketosteroids, chromatographic separation, and colorimetric determination, *Talbot, Wolfe, MacLachlan, and Berman*, 1941, 139, 521
- , determination, colorimetric, *Holtorf and Koch*, 1940, 135, 377
- , neutral, determination, colorimetric, correction equation, *Talbot, Berman, and MacLachlan*, 1942, 143, 211
- , total, α -, and β -, determination, colorimetric, *Talbot, Butler, and MacLachlan*, 1940, 132, 595
- α -17-Ketosteroids and β -17-ketosteroids, hydrolysis, extraction, and determination, spectrochemical, *Talbot, Butler, MacLachlan, and Jones*, 1940, 136, 365
- Kynurenic acid, kynurenine, and acetone bodies, tryptophane, 3-indolelactic acid, 3-indolepyruvic acid, and *l*(-)-kynurenine effect, *Borchers, Berg, and Whitman*, 1942, 145, 657
- Leucemia, specific substances, preparation, *Turner and Miller*, 1943, 147, 573
- Metabolites, sodium salicylate, *Kapp and Coburn*, 1942, 145, 549
- N^1 -Methylnicotinamide, *Huff and Perlzweig*, 1943, 150, 395
- , determination, *Huff and Perlzweig*, 1943, 150, 483
- Nicotinamide and related substances, determination, bacterial, *Isbell*,

Urine—continued:

- Wooley, Butler, and Sebrell*, 1941, 139, 499
- Nicotine determination, *Corcoran, Helmer, and Page*, 1939, 129, 89
- Nicotinic acid derivatives, determination, *Perlzweig, Levy, and Sarett*, 1940, 136, 729
- , —, excretion, *Melnick, Robinson, and Field*, 1940, 136, 145
- , —, factors influencing, *Melnick, Robinson, and Field*, 1940, 136, 131
- , —, determination, *Bandier and Hald* method, *Rosenblum and Jolliffe*, 1940, 134, 137
- , —, excretion, *Melnick, Robinson, and Field*, 1940, 136, 145
- , —, metabolite, *Huff and Perlzweig*, 1943, 150, 395
- , —, *N*-methyl derivatives, determination, *Sarett*, 1943, 150, 159
- Pantothenic acid, *Silber and Unna*, 1942, 142, 623
- Parathyroid hormone effect, *Logan*, 1939, 127, 711
- Phenols, determination, *Schmidt*, 1942, 145, 533
- Pigment-producing compound, green, pyridoxine relation, *Lepkovsky and Nielsen*, 1942, 144, 135
- Potassium determination, *Consolazio and Talbot*, 1938, 126, 55
- Pregnancy, allopregnanol-3(α)-one-20 isolation, *Pearlman, Pincus, and Werthessen*, 1942, 142, 649
- , androstanol-3(β)-one and allopregnanol-3(β)-one-20 isolation, *Heard and McKay*, 1939, 131, 371
- , *n*-butanol and, sodium pregnanediol glucuronidate distribution, *Woolf, Viergiver, and Allen*, 1942, 146, 323
- , dihydrotheelin isolation, *Smith, Smith, Huffman, Thayer, MacCorquodale, and Doisy*, 1939, 130, 431
- Huffman, MacCorquodale, Thayer, Doisy, Smith, and Smith*, 1940, 134, 591

Urine—continued:

- Pregnancy, Δ -5,7,9-estratrienol-3-one-17 isolation, *Heard and Hoffman*,
1940, 135, 801
1941, 138, 651
—, estrogens, determination, photometric, *Bachman and Pettit*,
1941, 138, 689
—, estrone sulfate, isolation, *Schachter and Marrian*,
1938, 126, 663
—, gonadotropic hormone, *Gurin, Bachman, and Wilson*,
1939, 128, 525
1940, 133, 467, 477
Lundgren, Gurin, Bachman, and Wilson,
1942, 142, 367
—, — — chemistry, *Gurin, Bachman, and Wilson*,
1940, 133, 467
—, — — purity, *Gurin, Bachman, and Wilson*,
1940, 133, 477
—, pregnandiol-3(α), 20(α), isolation, *Fish, Dorfman, and Young*,
1942, 143, 715
—, sodium pregnandiol glucuronide, determination, titrimetric, *Allen and Viergiver*,
1941, 141, 837
Pregnanediol, assay, *Marker and Hartman*,
1940, 133, 529
—, determination, *Astwood and Jones*,
1941, 137, 397
Protein, trichloroacetic acid-soluble, *Beckman, Hiller, Shedlovsky, and Archibald*,
1943, 148, 247
Proteins, analysis, *Murrill, Block, and Newburgh*,
1940, 133, 521
Pyruvate, thiamine effect, *Harper and Deuel*,
1941, 137, 233
Pyruvic acid excretion, thiamine effect, *Shils, Day, and McCollum*,
1941, 139, 145
Riboflavin, *Strong, Feeney, Moore, and Parsons*,
1941, 137, 363
— determination, fluorometric, *Najjar*,
1941, 141, 355
Sex hormones, male, *McCullagh and Osborn*,
1938, 126, 299
Shock effect, *Allison, Cole, Leatham, Nastuk, and Anderson*,
1943, 147, 255

Urine—continued:

- Sodium dehydroisoandrosterone sulfate, determination, *Talbot, Ryan, and Wolfe*,
1943, 148, 593
— pregnanediol glucuronide, determination, micro-, *Venning*,
1938, 126, 595
Steroid compounds, excretion, males, *Engel, Thorn, and Lewis*,
1941, 137, 205
Steroids, assay, *Marker and Hartman*,
1940, 133, 529
—, extraction apparatus, *Hershberg and Wolfe*,
1940, 133, 667
1941, 141, 215
—, ovariectomy effect, *Hirschmann*,
1940, 136, 483
Stilbestrol monoglycuronide isolation, *Mazur and Shorr*,
1942, 144, 283
Sulfanilyl-2-aminopyridine, excretion products, *Ratish, Bullowa, Ames, and Scudi*,
1939, 128, 279
Thiamine, determination, *Schultz, Atkin, and Frey*,
1940, 136, 713
Egaña and Meiklejohn,
1941, 141, 859
—, —, chemical, *Melnick and Field*,
1939, 130, 97
—, —, Prebluda-McCollum reaction, *Alexander and Levi*,
1942, 146, 399
—, —, thiochrome method, *Mason and Williams*,
1942, 146, 589
—, —, —, nicotinic acid ingestion effect, *Mason and Williams*,
1941, 140, 417
—, stability and form, *Melnick and Field*,
1939, 130, 97
Tocopherol, *Hines and Mattill*,
1943, 149, 549
Urea, determination, colorimetric, *Ormsby*,
1942, 146, 595
Vitamin B₆ excretion, *Scudi, Unna, and Antopol*,
1940, 135, 371
— C, determination, *Roe and Hall*,
1939, 128, 329
Zinc excretion, radioactive zinc isotope in study, *Sheline, Chaikoff, Jones, and Monigomery*,
1943, 147, 409

- Urocanic acid:** Histidine metabolism, intermediary, relation, *Darby and Lewis*, 1942, 146, 225
- Uronic acid(s):** Determination, micro-, *Kapp*, 1940, 134, 143
- Ursolic acid:** Methylation, *Sell and Kremers*, 1938, 126, 501
- Uterus:** Electrolytes, estrogenic substance influence, *Talbot, Lowry, and Astwood*, 1940, 132, 1
- See also* Hysterectomy

V

- Valeric acid:** Thiophene-, biotin relation, *Melville, Moyer, Hofmann, and du Vigneaud*, 1942, 146, 487
- Valine:** Dietary, indispensability, *Rose and Eppstein*, 1939, 127, 677
dl- and *dl*-iso-, metabolism, *Butts and Sinnhuber*, 1941, 139, 963
 Metabolism, phlorhizin glycosuria, *Rose, Johnson, and Haines*, 1942, 145, 679
- Vanadium:** Phospholipid oxidation, tissues, action, *Bernheim and Bernheim*, 1939, 127, 353
- van den Bergh reaction:** Chemistry, *Coolidge*, 1940, 132, 119
- Vapor pressure:** Measurement, thermoelectric, *Roepke and Baldes*, 1938, 126, 349
- Vegetable(s):** Green, extracts, acetone and petroleum ether, carotene stability, *Pepkowitz*, 1943, 149, 465
- Veratrine:** Alkaloids, *Craig and Jacobs*, 1939, 129, 79
 1940, 134, 123
 1941, 139, 263
Craig, Jacobs, and Lavin, 1941, 139, 277
Craig and Jacobs, 1941, 139, 293
Jacobs, Craig, and Lavin, 1941, 141, 51
Craig and Jacobs, 1941, 141, 253
 1942, 143, 427
Jacobs and Craig, 1943, 148, 41, 51
Craig and Jacobs, 1943, 148, 57
- Veratrine—continued:**
 Alkaloids, *Jacobs and Craig*, 1943, 149, 271
Craig and Jacobs, 1943, 149, 451
 Bases and solanidine, relationship, *Craig and Jacobs*, 1943, 149, 451
 Proto-, and its alkamine, *Jacobs and Craig*, 1943, 149, 271
 —, dehydrogenation, *Craig and Jacobs*, 1942, 143, 427
- Verine:** Proto-, *Jacobs and Craig*, 1943, 149, 271
- Vertebrate(s):** Blood cells, phosphorus, acid-soluble, *Rapoport and Guest*, 1941, 138, 269
- Vetch:** *See also* *Astragalus*, *Vicia*
- Vicia atropurpurea:** Seedlings, etiolated, asparagine and glutamine formation, *Vickery and Pucher*, 1943, 150, 197
- Virus:** *Aucuba* mosaic, protein, tomato roots, isolation, *Stanley*, 1938, 126, 125
 Bushy stunt, protein, homogeneity, *Lauffer*, 1942, 143, 99
 —, sedimentation rate, *Lauffer and Stanley*, 1940, 135, 463
 —, tomato, diffusion constant, *Neurath and Cooper*, 1940, 135, 455
 —, —, purification, *Stanley*, 1940, 135, 437
- Cucumber,** amino acids, aromatic, *Knight and Stanley*, 1941, 141, 39
 —, preparation and properties, *Knight and Stanley*, 1941, 141, 29
- Mosaic,** latent, absorption spectra, and nucleic acid and protein absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
 — protein, latent, properties, *Loring*, 1938, 126, 455
 — —, —, ultracentrifugal analysis, *Wyckoff*, 1939, 128, 729
- Papilloma protein,** molecular size, shape, and homogeneity, *Neurath, Cooper, Sharp, Taylor, Beard, and Beard*, 1941, 140, 293
- Plant,** isolation and crystallization, hydrophilic colloids, use in, *Cohen*, 1942, 144, 353

Virus—continued:

- Protein, rabbit papilloma, electrophoresis, *Sharp, Taylor, Beard, and Beard*, 1942, 142, 193
- Purified, electron microscope study, *Stanley and Anderson*, 1941, 139, 325
- Ring spot, absorption spectra, and nucleic acid and protein absorption spectra, *Lavin, Loring, and Stanley*, 1939, 130, 259
- Tobacco mosaic, acetyl derivatives, *Miller and Stanley*, 1941, 141, 905
- , amino acids, aromatic, *Knight and Stanley*, 1941, 141, 39
- , antiserum and, reaction, electron microscope study, *Anderson and Stanley*, 1941, 139, 339
- , carbobenzoxy, *p*-chlorobenzoyl, and benzenesulfonyl derivatives, *Miller and Stanley*, 1942, 146, 331
- , cleavage products, *Knight and Laufer*, 1942, 144, 411
- , denaturation, *Laufer and Dow*, 1941, 140, 509
- , —, measurement by phenolic groups, *Miller*, 1942, 146, 339
- , derivatives, *Miller and Stanley*, 1941, 141, 905
- , —, 1942, 146, 331
- Miller*, 1942, 146, 339, 345
- , —, phenolic groups, determination, tyrosine derivatives, relation, *Miller*, 1942, 146, 345
- , heat denaturation, *Laufer and Price*, 1940, 133, 1
- , intestine nucleophosphatase action, *Cohen and Stanley*, 1942, 142, 863
- , nucleic acid molecule, size and shape, *Cohen and Stanley*, 1942, 144, 589
- , —, properties and hydrolytic products, *Loring*, 1939, 130, 251
- , phenylureido derivatives, *Miller and Stanley*, 1941, 141, 905
- , physical and chemical properties, *Knight*, 1942, 145, 11
- , protein, amino acids, determination, *Ross*, 1941, 138, 741

Virus—continued:

- Tobacco mosaic protein, amino acids, fractionation, *Ross*, 1942, 143, 685
- , —, solutions, diffusion, *Neurath and Saum*, 1938, 126, 435
- , —, viscosity, *Laufer*, 1938, 126, 443
- , —, viscosimetry, *Frampson*, 1939, 129, 233
- , —, sulfur distribution, *Ross*, 1940, 136, 119
- , rib-grass strain, sulfur, *Knight*, 1943, 147, 663
- , ring spot, isolation and properties, *Stanley*, 1939, 129, 405
- , —, recovered plants, isolation, *Stanley*, 1939, 129, 429
- Vitamin(s): A, absorption experiments, *LePage and Pett*, 1941, 141, 747
- and A₂, structure, comparison, *Gray*, 1939, 131, 317
- , blood, visual test relation, *Pett and LePage*, 1940, 132, 585
- , butter fat, vitamin A intake effect, *Deuel, Halliday, Hallman, Johnston, and Miller*, 1941, 139, 479
- , cyclized, fish liver oils, *Embree*, 1939, 128, 187
- , deficiency, *Pett and LePage*, 1940, 132, 585
- , determination, colorimetric, *Koehn and Sherman*, 1940, 132, 527
- , eggs, diet effect, *Almquist, MacKinney, and Mecchi*, 1943, 150, 99
- , hypervitaminosis D₂ and D₃, ingestion effect, *Morgan, Shimotori, and Hendricks*, 1940, 134, 761
- , intake, butter fat vitamin A, effect, *Deuel, Halliday, Hallman, Johnston, and Miller*, 1941, 139, 479
- , liver cell tumors, relation, *Goerner and Goerner*, 1939, 128, 559
- , non-crystallizable, *Baxter, Harris, Hickman, and Robeson*, 1941, 141, 991
- , porous powder, catalytic effect, *Holmes and Corbet*, 1939, 127, 449
- , storage, body, *Little, Thomas, and Sherman*, 1943, 148, 441

Vitamin(s)—continued:

- A, tissue, dibenzanthracene and alcohol effect, *Baumann, Foster, and Moore*, 1942, 142, 597
- A₂, activity, *Jensen, Shantz, Embree, Cawley, and Harris*, 1943, 149, 473
- , chemical constitution, *Gray and Cawley*, 1940, 134, 397
- , cyclization, *Embree and Shantz*, 1940, 132, 619
- Antianemia, chick, *O'Dell and Hogan*, 1943, 149, 323
- B complex, factor W relation, *Frost and Elvehjem*, 1939, 128, 23
- , fat synthesis, relation, *Longenecker, Gavin, and McHenry*, 1941, 139, 611
- — supplement, homocystine replacement of methionine, relation, *du Vigneaud, Dyer, and Kies*, 1939, 130, 325
- — synthesis, sheep rumen, *McElroy and Goss*, 1939, 130, 437
- —. See also *p*-Aminobenzoic acid, Pantothenic acid
- factors, determination, polarographic, *Lingane and Davis*, 1941, 137, 567
- , fat metabolism and, *McHenry and Gavin*, 1939, 128, 45
- Gavin and McHenry*, 1940, 132, 41
- McHenry and Gavin*, 1941, 138, 471
- , — synthesis from protein, effect, *McHenry and Gavin*, 1941, 138, 471
- , filtrate factors, deficiency, sodium chloride levels, and sodium chloride administration effect, *Ralli, Clarke, and Kennedy*, 1941, 141, 105
- , heat-stable components, tissue metabolism, effect, *Hastings, Muus, and Bessey*, 1939, 129, 295
- sources, antioxidant activity, *György and Tomarelli*, 1943, 147, 515
- B₁, cocarboxylase relation, *Melnick and Field*, 1939, 127, 531
- deficiency, determination, blood cocarboxylase relation, *Goodhart and Sinclair*, 1940, 132, 11

Vitamin(s)—continued:

- B₁, determination, chemical, *Melnick and Field*, 1939, 127, 505, 515, 531
- , muscle, working, pyruvate, effect, *Bollman and Flock*, 1939, 130, 565
- phosphorylation, adrenalectomy effect, *Ferrebee*, 1940, 136, 719
- , pyrimidine, photochemistry and spectroscopy, *Uber and Verbrugge*, 1940, 134, 273
- , thiazole, photochemistry, *Uber and Verbrugge*, 1940, 136, 81
- . See also Thiamine
- B₂ complex filtrate factor, nature, *Mohammad, Emerson, Emerson, and Evans*, 1940, 133, 17
- phosphorylation, adrenalectomy effect, *Ferrebee*, 1940, 136, 719
- . See also Riboflavin
- B₄ deficiency, chick, arginine, glycine, and cystine effect, *Briggs, Luckey, Elvehjem, and Hart*, 1943, 150, 11
- B₆, acrodynia, effect, *Schneider, Steenbock, and Platz*, 1940, 132, 539
- , biological materials, *Siegel, Melnick, and Oser*, 1943, 149, 361
- , body fat, effect, *Gavin and McHenry*, 1940, 132, 41
- , determination, biological, *Conger and Elvehjem*, 1941, 138, 555
- , —, colorimetric, *Scudi*, 1941, 139, 707
- , factor U, relation, *Stokstad, Manning, and Rogers*, 1940, 132, 463
- , — W, relation, *Black, Frost, and Elvehjem*, 1940, 132, 65
- , foods, determination, *Bina, Thomas, and Brown*, 1943, 148, 111
- , light effect, *Hochberg, Melnick, Siegel, and Oser*, 1943, 148, 253
- , liver fat, effect, *Gavin and McHenry*, 1940, 132, 41
- , metabolism, *Scudi, Buhs, and Hood*, 1942, 142, 323
- , nutrition, chick, *Hegsted, Oleson, Elvehjem, and Hart*, 1939, 130, 423
- preparation, *Greene*, 1939, 130, 513
- , urine, excretion, *Scudi, Unna, and Antopol*, 1940, 135, 371

Vitamin(s)—continued:

- B₅-borate complex, formation, *Scudi, Bastedo, and Webb*, 1940, 136, 399
- B₆. See also Dermatitis, anti-Pyridoxine
- C, deficiency, homogentisic acid and tyrosine metabolites, excretion, effect, *Sealock and Silberstein*, 1940, 135, 251
- , determination, bacteria for, *Gunsalus and Hand*, 1941, 141, 853
- , excretion, *Musulin, Tully, Longenecker, and King*, 1939, 129, 437
- , — and hypoprothrombinemia, 3,3'-methylenebis(4-hydroxycoumarin) effect, *Baumann, Field, Overman, and Link*, 1942, 146, 7
- , —, organic compound relation, *Longenecker, Musulin, Tully, and King*, 1939, 129, 445
- , rat, copper and organic substances, effect, *Svirbely*, 1939, 131, 233
- , suprarenals, diphtherial intoxication, relation, *Torrance*, 1940, 132, 575
- , synthesis, *Musulin, Tully, Longenecker, and King*, 1939, 129, 437
- , —, organic compounds, effect, *Longenecker, Fricke, and King*, 1940, 135, 497
- , —, —, relation, *Longenecker, Musulin, Tully, and King*, 1939, 129, 445
- , urine, determination, *Roe and Hall*, 1939, 128, 329
- , See also Ascorbic acid
- D, absorption and retention, massive dose effect, *Morgan and Shimotori*, 1943, 147, 189
- , action, radioactive phosphorus in study, *Shimotori and Morgan*, 1943, 147, 201
- , blood lead, influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239
- , — serum phosphatase, effect, *Correll and Wise*, 1938, 126, 581
- , body iron, effect, *Fuhr and Steenbock*, 1943, 147, 65
- , bone ash and body weight, effect, *Correll and Wise*, 1938, 126, 573

Vitamin(s)—continued:

- D, bone lead, influence, *Sobel, Yuska, Peters, and Kramer*, 1940, 132, 239
- , determination, radioactive strontium in, *Weissberger and Harris*, 1942, 144, 287
- , hemoglobin production, effect, *Fuhr and Steenbock*, 1943, 147, 65
- , iron utilization, effect, *Fuhr and Steenbock*, 1943, 147, 59, 65, 71
- , new, cod liver oil, *Bills, Massengale, Hickman, and Gray*, 1938, 126, 241
- , phosphorus metabolism, rickets, effect, radioactive isotopes as indicator, *Cohn and Greenberg*, 1939, 130, 625
- , various sources, efficiency, *Correll and Wise*, 1938, 126, 573, 581
- D₂, crystalline, and derivatives, stability, *Huber and Barlow*, 1943, 149, 125
- , determination, antimony trichloride reagent, *Zimmerli, Nield, and Russell*, 1943, 148, 245
- , —, spectrophotometric, *Nield, Russell, and Zimmerli*, 1940, 136, 73
- , phosphorus-low diet, effect, *Schneider and Steenbock*, 1939, 128, 159
- D₃, crystalline, and derivatives, stability, *Huber and Barlow*, 1943, 149, 125
- , determination, antimony trichloride reagent, *Zimmerli, Nield, and Russell*, 1943, 148, 245
- , —, spectrophotometric, *Nield, Russell, and Zimmerli*, 1940, 136, 73
- Deficiency, anemia relation, chick, *Hogan and Parrott*, 1940, 132, 507
- , tissue metabolism, *Hastings, Muus, and Bessey*, 1939, 129, 295
- , —, *Muus, Weiss, and Hastings*, 1939, 129, 303
- , — oxygen uptake, *Sure and DeWitt*, 1938, 126, 287
- Determination, *Lactobacillus casei* growth, hydrogen ion concentration

Vitamin(s)—continued:

- change as measure, *Silber and Mushett*, 1942, 146, 271
- E, activity, α -tocopherol-related compounds, *Tishler and Evans*, 1941, 139, 241
- , deficiency, muscle oxygen consumption, creatine, and chloride, α -tocopherol effect, *Houchin and Mattill*, 1942, 146, 301
- , oxidation, *Golumbic and Mattill*, 1940, 134, 535
- , α -tocoquinone, relation, *Emerson, Emerson, and Evans*, 1939, 131, 409
- , *See also* Tocopherol
- H, foodstuffs and yeast, *György*, 1939, 131, 733
- , isolation, *György, Kuhn, and Lederer*, 1939, 131, 745
- , liver, isolation, *du Vigneaud, Hofmann, Melville, and György*, 1941, 140, 643
- , physicochemical properties, *Birch and György*, 1939, 131, 761
- , *See also* Biotin
- Interrelationships, *Sure, Theis, and Harrelson*, 1939, 129, 245
- Sure and Ford*, 1942, 146, 241
- K, activity, *Fieser, Tishler, and Sampson*, 1941, 137, 659
- , —, 4-amino-2-methyl-1-naphthol and 4-amino-3-methyl-1-naphthol, *Emmett, Kamm, and Sharp*, 1940, 133, 285
- , —, benzoquinone series, *Ansbacher and Fernholz*, 1939, 131, 399
- , bile salt substitute for administration with, *Lozinski and Gottlieb*, 1940, 133, 635
- , blood coagulation, polyhydroxy-anthraquinones, effect, *Martin and Lischer*, 1941, 137, 169
- , chemical constitution, *Fieser, Tishler, and Sampson*, 1941, 137, 659
- , determination, colorimetric, *Scudi and Buhs*, 1942, 143, 665
- , —, —, oxidation-reduction, *Scudi and Buhs*, 1941, 141, 451

Vitamin(s)—continued:

- K, physicochemical concentration, *Riegel, Schweitzer, and Smith*, 1939, 129, 495
- , water-soluble, absorption, *Smith and Owen*, 1940, 134, 783
- K₁, absorption spectrum, *Ewing, Vandenberg, and Kamm*, 1939, 131, 345
- Ewing, Tomkins, and Kamm*, 1943, 147, 233
- , alfalfa, identification, *MacCorquodale, McKee, Binkley, Cheney, Holcomb, Thayer, and Doisy*, 1939, 130, 433
- , associated quinones and naphthoquinones, determination, reduction-oxidation method, *Trenner and Bacher*, 1941, 137, 745
- , constitution, *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 1939, 131, 357
- , derivative, *Almquist and Klose*, 1939, 130, 791
- , determination, reduction-oxidation method, *Trenner and Bacher*, 1941, 137, 745
- , isolation, *Binkley, MacCorquodale, Thayer, and Doisy*, 1939, 130, 219
- , light effect, *Ewing, Tomkins, and Kamm*, 1943, 147, 233
- , 2-methyl-1,4-naphthoquinone, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm*, 1940, 132, 467
- , synthesis, *MacCorquodale, Cheney, Binkley, Holcomb, McKee, Thayer, and Doisy*, 1939, 131, 357
- Klose and Almquist*, 1940, 132, 469
- K₁-related compounds, absorption spectra, *Ewing, Vandenberg, and Kamm*, 1939, 131, 345
- K₂, absorption spectra, *Ewing, Vandenberg, and Kamm*, 1939, 131, 345
- , chemical constitution, *Binkley, McKee, Thayer, and Doisy*, 1940, 133, 721
- , isolation, *McKee, Binkley, Thayer, MacCorquodale, and Doisy*, 1939, 131, 327

Vitamin(s)—continued:

- K₂-related compounds, absorption spectra, *Ewing, Vandenbelt, and Kamm*, 1939, 131, 345
- Perspiration, *Mickelsen and Keys*, 1943, 149, 479
- Pro-, A, watermelon, *Zechmeister and Polgár*, 1941, 139, 193
- Water-soluble, essential, chick, *Briggs, Luckey, Elvehjem, and Hart*, 1943, 148, 163
- See also Avitaminosis, Factor V, Factor W

W

- Walden inversion: *Levene and Rothen*, 1939, 127, 237
- Water: Blood and extravascular fluid exchange, *Fleznar, Gellhorn, and Merrell*, 1942, 144, 35
- muscle, exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- tendon, exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 389
- , determination, distillation method, *Miller*, 1942, 143, 65
- , dolphin, *Eichelberger, Fletcher, Geiling, and Vos*, 1940, 133, 145
- , equilibrium, adrenal insufficiency, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
- Body, distribution, dehydration and hydration, nephrectomy effect, *Chanutin and Ludewig*, 1939, 131, 519
- Hydrogen and, exchange reaction, biological catalysis, *Hoberman and Rittenberg*, 1943, 147, 211
- Kidney, normal and hydronephrotic, *Eichelberger and Bibler*, 1940, 132, 645
- Liver, *Marble, Grafflin, and Smith*, 1940, 134, 253
- , fasting, glucose feeding effect, *McBride*, 1943, 147, 333
- , fat and, relation, fasting effect, *MacLachlan, Hodge, Bloor, Welch, Truax, and Taylor*, 1942, 143, 473

Water—continued:

- Liver glycogen deposition, relation, *Fenn and Haeghe*, 1940, 136, 87
- , — relation, *McBride, Guest, and Scott*, 1941, 139, 943
- , potassium salts, injection effect, *Eichelberger*, 1941, 138, 583
- Muscle and blood, exchange, adrenal insufficiency, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367
- — — plasma, exchange, *Mellors, Muntwyler, and Mautz*, 1942, 144, 773
- , dolphin, *Eichelberger, Geiling, and Vos*, 1940, 133, 661
- , hydronephrosis, potassium salts, injection effect, *Eichelberger*, 1941, 140, 467
- , potassium salts, injection effect, *Eichelberger*, 1941, 138, 583
- , renal impairment influence, *Eichelberger*, 1939, 128, 137
- Sodium dehydroisoandrosterone sulfate, determination, *Talbot, Ryan, and Wolfe*, 1943, 148, 593
- Tendon and blood, exchange, *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 389
- Tissue, *Miller*, 1942, 143, 65
- , determination, distillation method, *Miller*, 1943, 149, 153
- , equilibrium, *Muntwyler, Mellors, and Mautz*, 1940, 134, 345
- , *Muntwyler, Mellors, Mautz, and Mangun*, 1940, 134, 367, 389
- See also Dehydration, Hydration
- Watermelon: Carotenoid and provitamin A, *Zechmeister and Polgár*, 1941, 139, 193
- Wax: Fractions, tubercle bacillus, human, chemistry, *Wiegand and Anderson*, 1938, 126, 515
- Tubercle bacillus, avian, mycolic acids, *Anderson and Creighton*, 1939, 129, 57
- , —, bovine, chemistry, *Cason and Anderson*, 1938, 126, 527
- Wheat: Amylase, starch, action, *Stamberg and Bailey*, 1938, 126, 479

Wheat—continued:

- Flour, Hungarian, carotenoids, *Zechmeister and Cholnok*, 1940, 135, 31
- Indian, mucilage, *Anderson, Gillette, and Seeley*, 1941, 140, 569
- Protein, crystalline, phosphatide reversal, antimicrobial action, *Woolley and Krampitz*, 1942, 146, 273
- Wool: Amino acids, *Block*, 1939, 128, 181
- Lanthionine isolation, *Horn, Jones, and Ringel*, 1941, 138, 141
- synthesis, *du Vigneaud and Brown*, 1941, 138, 151
- Powdered, chemistry, *Routh*, 1940, 135, 175
- Sulfur-containing amino acid, isolation, *Horn, Jones, and Ringel*, 1941, 138, 141
- — —, synthesis, *du Vigneaud and Brown*, 1941, 138, 151
- Work: Muscle lactic acid formation, effect, *Flock, Ingle, and Bollman*, 1939, 129, 99
- pyruvate, vitamin B₁ effect, *Bollman and Flock*, 1939, 130, 565
- See also Exercise, Muscle
- Worm: Marine. See also *Spirographis, Urechis*

X

- Xanthine:** Determination, *Hitchings*, 1941, 139, 843
- Oxidase, blood, *Blauch, Koch, and Hanke*, 1939, 130, 471
- , liver, riboflavin effect, *Axelrod and Elvehjem*, 1941, 140, 725
- , purification and properties, *Ball*, 1939, 128, 51
- Xanthopterin:** Anemia factor, fish, *Simmons and Norris*, 1941, 140, 679
- Succinylsulfathiazole and, leucopenia and body weight loss, effect, *Totter and Day*, 1943, 147, 257
- Xanthurenic acid:** Tryptophane metabolism, pyridoxine deficiency, effect, *Lepkovsky, Roboz, and Haagen-Smit*, 1943, 149, 195
- Xylose:** Blood serum phosphorus, effect, *Free and Leonards*, 1943, 149, 203

Xylose—continued:

- Blood sugar, effect, *Darby and Day*, 1940, 133, 503
- l-, metabolism, *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 1940, 136, 1
- Xylulose:** d- and l-, metabolism, pancreatotomy effect, *Larson, Chambers, Blatherwick, Ewing, and Sawyer*, 1939, 129, 701
- l-, metabolism, *Larson, Blatherwick, Bradshaw, Ewing, and Sawyer*, 1941, 138, 353

Y

- Yeast:** p-Aminobenzoic acid isolation, *Blanchard*, 1941, 140, 919
- Carboxylase, activity, *Cajori*, 1942, 143, 357
- , N,N-dimethylaminoazobenzene split-products, effect, *Kensler, Young, and Rhoads*, 1942, 143, 465
- Coenzyme I preparation, *Williamson and Green*, 1940, 135, 345
- Egg white injury curative factor, *György*, 1939, 131, 733
- Extract, growth effect, *Jukes*, 1940, 133, 631
- Flavoprotein, *Green, Knox, and Stumpf*, 1941, 138, 775
- Fresh, anticomplementary factor, *Pillemer and Ecker*, 1941, 137, 139
- Nitrogen metabolism, ammonia and carbamide effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- , bios effect, *Schultz, Atkin, and Frey*, 1940, 135, 267
- Pasteur enzyme, absorption spectrum, *Melnick*, 1941, 141, 269
- Phosphatase determination, *Rae and Eastcott*, 1940, 136, 443
- Polypeptidase, isolation and properties, *Johnson*, 1941, 137, 575
- Pyridine nucleotide preparation, *Klein*, 1940, 134, 43
- Respiration, cytochrome c effect, *Carroll and Stier*, 1941, 137, 787
- Respiratory ferment, absorption spectrum, *Melnick*, 1941, 141, 269
- Vitamin H, *György*, 1939, 131, 733

Z

ays: *See* Maize

Hydrolysates, optical rotation,
hydrolysis and heating effect, *Borchers and Berg*, 1942, 142, 693
tization, critical temperature,
ethyl alcohol, *Manley and Evans*,
1942, 143, 701

Leucine, hydrolysates, autoclaving
effect, *Borchers, Totter, and Berg*,
1942, 142, 697

Carbonic anhydrase, relation,
Love, Elvehjem, and Hart,

1940, 136, 425

Fain and Locke, 1942, 143, 729

Efficient diet, blood uric acid and
uricase, effect, *Wachtel, Hove*,
Elvehjem, and Hart, 1941, 138, 361

Zinc—continued:

Feces, excretion, radioactive zinc
isotope in study, *Sheline, Chaikoff*,
Jones, and Montgomery,

1943, 147, 409

Metabolism, radioactive isotope in
study, *Sheline, Chaikoff, Jones, and*
Montgomery, 1943, 147, 409

1943, 149, 139

Phosphatases, alkaline, effect, *Hove*,
Elvehjem, and Hart, 1940, 134, 425

Radioactive, tissues, radioactive zinc
isotope in study, *Sheline, Chaikoff*,
Jones, and Montgomery,

1943, 194, 139

Urine, excretion, radioactive zinc
isotope in study, *Sheline, Chaikoff*,
Jones, and Montgomery,

1943, 147, 409

INSTITUTE LIBRARY

Date of issue, Date of issue. Date of issue,

19/1/48-1002.